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GEOGRAPHY AND CARTOGRAPHY FOR CENSUS PURPOSES IN LATIN AMERICA*

By Jorge Zarur†

RESUMEN

Este informe trata, principalmente, de los trabajos geográficos y cartográficos fundamentales, que en la actualidad existen en las naciones latinoamericanas y que pueden ser útiles para la recopilación de los mapas censales. Se ocupa también de los recursos humanos y materiales que deben ser empleados en la compilación del material cartográfico con destino al Censo de las Américas de 1950.

Gran parte del material incluido en este informe consiste en un resumen de las observaciones e investigaciones hechas en el curso de un viaje sobre el terreno llevado a cabo por el autor por todas las Repúblicas Americanas, con la sola excepción de Paraguay, de octubre de 1946 a agosto de 1947. El estudio no abarca el Canadá, los Estados Unidos y las posesiones europeas en las Américas. Las conclusiones que forman parte del trabajo, respecto a la exactitud y confiabilidad de los mapas examinados, se refieren a las apreciaciones del propio autor, deducidas de los exámenes del material y las consultas con los funcionarios responsables de las respectivas naciones, con quienes trató sobre los problemas cartográficos.

En el informe se agrupan los países con fines solamente cartográficos, de acuerdo con la similitud de los problemas sobre mapas que ellos confrontan, y su experiencia y recursos al respecto. Al final del capítulo dedicado a cada país, se presentan las conclusiones y recomendaciones.

El agrupamiento de los países, es como sigue:

1. México.
2. Centro América Continental: Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica y Panamá.
3. Centro América Caribe: República Dominicana, Haiti y Cuba.
4. Norte de Sur América: Venezuela y Colombia.
5. Oeste de Sur América: Ecuador, Perú, Bolivia y Chile.
6. Este de Sur América: Argentina, Uruguay y Paraguay.
7. Brasil.

Foreword

As a basic step in the preparation of plans for the 1950 Census of the Americas, a census map survey was made by Dr. Jorge Zarur, assistant secretary general of the Conselho Nacional de Geografia, Instituto Brasileiro de Geografia e Estatística, Rio de Janeiro, Brazil. This project was started

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Note: This study is being published in two parts. The second part will appear in *Estadística* No. 19.

* This study was originally reproduced as a working paper for the First Session of the Committee on the 1950 Census of the Americas, held in Washington, D. C., September 2-8, and 16, 1947. Following modifications introduced subsequently by the author, it is now made available as a study in the IASI project series.

† Subdiretor, Serviço de Geografia e Cartografia, e Assistente do Secretário Geral do Conselho Nacional de Geografia, Instituto Brasileiro de Geografia e Estatística.

in September 1946 and completed in August 1947. It was sponsored and supported jointly by the Inter American Statistical Institute; the Instituto Brasileiro de Geografia e Estatística; the Institute of Inter-American Affairs (United States); and the Pan American Institute of Geography and History.

The primary aim of the project was to determine the availability of maps suitable for census purposes in each of the American nations except the United States and Canada, and to consult and advise with cartographers and statisticians of these nations concerning the preparation of adequate maps for the enumeration of population and agriculture in the 1950 Census.

In addition to investigating the map collections located in Brazil and in the United States, which cover many of the Latin American nations, Dr. Zarur visited personally each country except Paraguay. While in the individual countries, Dr. Zarur worked closely with national technicians to determine geographic and cartographic needs and the means to provide the elements necessary for the successful conduct of a national census in 1950, in each country.

On behalf of the participating organizations, the undersigned take this opportunity to express their deep appreciation of the outstanding work of Dr. Zarur and the collaboration and contributions in time and effort made by the respective nations through their technicians, in connection with this project.

HALBERT L. DUNN, Secretary General
Inter American Statistical Institute

ROBERT H. RANDALL, Chairman
Commission on Cartography
Pan American Institute of Geography and History

CALVERT L. DEDRICK, Chairman
Committee on the 1950 Census of the Americas

Washington, D. C.
August 1947

INTRODUCTION

This report deals mainly with the basic geographic and cartographic work already existing in the Latin American nations which could serve for the compilation of census maps, and with the available human and material resources which should be utilized for the compilation of the cartographic background material for the 1950 Census of the Americas.

Cartographic and geographic resources are of great importance for census purposes. A clear and comprehensive definition of geographic terms, and of large and small scale maps showing the location and extension of the main physical and cultural features, may be considered essential. Money and time are saved by using fully such geographic and cartographic material, since they make possible an evaluation of the conditions resulting from the natural environment and the distribution pattern of population and wealth.

The role of geographic and cartographic material in statistical and census work is not yet fully realized. Statisticians, geographers and cartographers generally are not sure as to how maps and geographic research could be best used in planning, collecting, controlling and presenting their statistical data with acceptable precision.

Proper budgeting, field operations, tabulation and publication can be successfully planned and administered if good geographic and cartographic

material is available. Also, when properly used by supervisors and enumerators, maps serve for control, division of work, accessibility to the enumeration unit, and for a general guidance.

The clear definition of geographic terms for the 1950 Census of the Americas is one of the most important preliminary jobs to be done. In the census of a whole continent, where various countries with marked regional differences are involved and where comparability of data is desired, this problem of definition of geographic features (what is *urban* or *rural?* what is a *village*, *caserío*, *poblado?*) is fundamental.

The precise delimitation of political boundary descriptions on maps, and their location in the field at the time of the census, together with the accurate measurements of the areas of various types of civil divisions and settlements, is a prime requisite. Office records of the territorial divisions and the number of existing settlements, only, are not enough. For an agricultural census the problem is even more complex, demanding large scale rural property maps.

At present, Latin America is "terra incognita." The mapping and geographic activities have not produced enough material suitable for use, without considerable additional work, in the 1950 census. The areas covered by acceptable large scale maps are relatively small (probably not over 10 percent of all Latin America), and are widely separated. The cultural information on the existing maps is not periodically brought up-to-date.

In most countries very little has been done in the way of the demarcation of the boundaries of the internal territorial divisions, and in many cases the work done is of relatively poor reliability since the maps do not represent the actual field conditions. The permanent recording on maps of changes in civil divisions and cultural information is not a regular procedure. The terms for geographic features, as traditionally used in the various countries, have not been systematically classified, and their importance for statistical and census work is generally overlooked.

In most cases no adequate co-ordination exists between the mapping and geographic organization and the statistical system. Only three countries have complete cartographic coverage for census purposes, and even their material could be improved considerably. Very little cartographic and geographic work as such is done by the statistical and census agencies for their own needs and purposes, because adequate large-scale maps involve expensive operations. As a result, statisticians have not had access to proper geographic and cartographic material.

Cartographic and geographic work in Latin America until recent years was sporadic, and did not follow a balanced or systematic program. The higher authorities in certain countries did not appreciate the importance of mapping, with the net results that little interest was displayed and very little done along promotional lines. Funds were always short. Trained personnel has been and is one of the most critical problems. These facts account largely for the poor cartographic coverage and low standards of many of the existing maps.

Undoubtedly, this lack of map coverage has had its repercussion in the standards of the statistical and census work. As a matter of fact some countries have never taken an agricultural census because of the difficulties, in time and cost, in getting the cartographic and geographic background for their work (mainly areas and location of rural properties and minor civil divisions maps).

At present, an extensive co-operative mapping project is under way be-

tween the United States, through the Inter-American Geodetic Survey (IAGS), and many of the other American republics. This project calls for first-order triangulation, precise leveling, aerial photography, and the production of the corresponding large-scale topographic maps.

By virtue of the IAGS project, substantial areas of Central America and the Caribbean will have been mapped by 1950 and much additional aerial photography will also be available and can be used for the Census of the Americas.

In the South American countries, where the IAGS is not starting operations, very little additional map coverage may be achieved before 1950 other than the normal work now being done by the national agencies. The large areas of the countries concerned, the difficulties of many types resulting from natural conditions, the limited resources and short time available all lead to the conclusion that no substantial new contributions may be made to the cartographic assets of South America in time to be of use to the 1950 Census.

During the last war, and thereafter, large areas of Central and South America were photographed aerially, generally at the scale of 1/40 000 (vertical and trimetrogon), by United States agencies. No full use of this air photography is being made except in compiling small-scale aeronautical charts. In the regions where maps are not available, the photographs could be used for census purposes directly or after an enlargement. For urban centers and scattered settlements, the use of the available air photography would make it possible for the census administrator to have good background material. This is feasible because most of the countries concerned have prints of these air photographs.

The research work done by the author in preparation for his trip, in the Pan American Institute of Geography and History, and in the major United States map libraries, shows the existence of a suprisingly large number of maps for the majority of the American republics. However, the area covered by these maps is relatively small. The incompleteness of the map collections in the United States is due to several factors, the most outstanding being the belated interest in Latin American affairs, and the sporadic mapping activities in the various countries. Another very important factor is that although many maps are compiled, they never reach the public because they are not reproduced in quantity.

In the last five years a new era has started in the cartographic and geographic discovery of Latin America. More responsible people are interested now in cartography than ever before, and more money is being invested by the countries for "know-how" and equipment. As a result of this movement for more and better maps, products of higher technical value are now being made. For this stimulation of cartographic interest, credit should be given to the magnificent job done by the Pan American Institute of Geography and History, particularly by its Commission on Cartography. The United States Government co-operation in recent years has been fundamental in the progress of map-making in the Western Hemisphere.

Most of the material presented in this report represents a summary of observations and research made in the course of a field trip to all the American Republics (with the single exception of Paraguay), between October 1946 and August 1947. During this trip 20 reports were presented to the chairman of the Committee on the 1950 Census of the Americas. Statistical as well as cartographic and geographic aspects of census problems were discussed in

detail. This project does not include reports on Canada, the United States, and the European possessions in the Americas.

The conclusions presented in this study in respect to the accuracy and reliability of the maps examined are the author's personal evaluation based on examination of the material and on consultation with the responsible officials of the respective nations with whom these cartographic problems were discussed.

Countries are grouped in this report for cartographic purposes only, in accordance with the similarity of their mapping problems, background, and resources. General conclusions and recommendations are presented at the end of the chapter devoted to each country.

Thus, for the purpose of this report only, the countries will be grouped in the following regions:

1. Mexico.
2. Continental Central America which includes Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, and Panama.
3. Caribbean Central America which includes Dominican Republic, Haiti, and Cuba.
4. Northern South America which includes Venezuela and Colombia.
5. Western South America which includes Ecuador, Peru, Bolivia, and Chile.
6. Eastern South America which includes Argentina, Uruguay, and Paraguay.
7. Brazil.

MEXICO

At present the main mapping agencies in Mexico are: The Dirección de Geografía, Meteorología e Hidrología, of the Secretaría de Agricultura y Fomento; the Servicio Geográfico del Ejército; and the Comité de Coordinación de la Carta de la República.

The Dirección de Geografía, Meteorología e Hidrología and the Servicio Geográfico del Ejército are the agencies doing most of the field work and original surveys. The Comité de Coordináción de la Carta formerly was a part of the Instituto de Geografía de la Universidad Nacional. Today it is a co-ordinating body for the mapping agencies of the country. It has limited personnel and resources, and is endeavoring to make a map at the scale of 1/500,000 for the whole country. Besides the international boundaries, the following areas have been adequately mapped: Yucatán, Tabasco, Puebla, Morelos; Federal District; Zacatecas, Aguas Calientes, Jalisco, Colima, parts of Chiapas and Guanajuato. From these, usable census maps could be made without much difficulty. Based only on astronomic control at 1/100,000, a survey exists covering part of the States of Mexico, Sonora, Chihuahua, Tamaulipas, Nuevo León, San Louis Potosí, and Veracruz (this last set of maps is out-of-date). These maps also could be used for census purposes. To date, about 15 per cent of the territory of Mexico has been covered by trimetrogon photography and about 5 percent by vertical photography.

Furthermore, there is a set of maps at the scale of 1/500,000 (51 sheets) which covers the whole of Mexico. It is currently being revised. Based mainly on this work, an atlas for states showing minor civil divisions has been prepared.

There is no accurate knowledge of the urban maps available, but for the main centers these could be obtained from the local governments. The use of aerial photography will substantially reduce the problem of making these urban maps.

As a whole the present map output of Mexico, based on geodetic control, is relatively very small. The cartographic system is currently being reorgan-

ized. Mexico has well-trained personnel in higher grade levels, but it does not have sufficient technical equipment and, more than anything else, does not have co-ordination between the main mapping agencies. Within the last few months, great strides have been made in this latter aspect.

The Dirección General de Estadística (DGE) has a Sección de Registro de Localidades under the División del Censo de Población and maintains a record of all inhabited places. For the Census of 1940, it has on file 122,434 localities, and for 1950 about 175,000 probably will be recorded.

The Sección de Registro de Localidades does not make any studies of definitions of geographic terms, but for the census operation the following "localidades" are considered: (a) Ciudades; (b) conjugaciones; (c) pueblos; (d) villas; (e) ejidos; (f) estación ferrocarril; (g) fincas; (h) haciendas, etc.

SUMMARY FOR MEXICO

Kind of Mapping Organization		Military and Civilian
Approximate per cent of available basic large-scale maps	Scale of 1/100,000 or larger	15%
	Scale of 1/100,000 to 1/250,000	—
Small-scale maps	1/500,000	Yes, 100%
	1/1,000,000	—
Air photography available	Vertical	5%
	Trimetrogon	15%
Rural cadastral maps available	Adequate surveys	—
	Sketches	—
Urban cadastral maps available	Adequate surveys	20 LC
	Sketches	Partially
Minor civil division (M.C.D.) maps		—
Field monumentation of boundaries M.C.D.		—
Effective Legislation regulating M.C.D.		—
Geographic and cartographic unit in statistical system		—
Civil divisions for July 1947 (approximate)	Major	Estados 28 Territorios 3 Distrito Federal 1
	Secondary	—
	Minor	Municipios 2350

Symbol used in table:
LC — Larger centers.

The records made by this Sección lack a fundamental cartographic basis. There are no national criteria for classification of the localities (localidades) and each state is free to create or classify them at any time. The civil boundaries are, in most cases, not well known and all cartographic work showing civil divisions is approximate.

The Dirección General de Estadística (DGE) also has a Sección de Cartografía y Gráficos which prepares some very small-scale statistical atlases. The work of the Sección de Registro de Localidades and that of the Sección de Cartografía y Gráficos is not co-ordinated.

In the last census, sketch maps for certain areas were made by the supervisor ("promotor") with the help of mayors, teachers, and local inhabitants. Unfortunately, most of this material was destroyed in a fire.

The country is divided into 28 states, 3 territories, and one Federal District, and about 2,350 municipios.

Conclusions and recommendations

1. Co-ordination of all mapping activities of the country is needed. Also, co-ordination is needed between the cartographic and statistical organizations.

2. The projects for large-scale mapping have progressed slowly. A small portion of the country (about 15 per cent) is adequately surveyed. The existing air photographs of the country should be indexed. Most of the state and municipal boundaries are not surveyed; the minor civil division maps do not represent the actual delimitations.

3. The Dirección General de Estadística y Censos does not regularly have adequate cartographic and geographic material. The Secciones de Registro de Localidades, and Cartografía y Gráficos of the Dirección General de Estadística should be merged. The reorganized Sección should be in charge of recording all changes in minor civil divisions, the definition of geographic terms, and the available cartographic material in order to prepare the cartographic work for statistical and census purposes.

CONTINENTAL CENTRAL AMERICA

This region covers Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, and Panama.

The only country with a complete topographic coverage is Nicaragua, but the maps are out-of-date. Panama has a partial coverage of large scale maps based on geodetic control. All of the countries have large coverage of vertical photography and complete trimetrogon photography.

Guatemala, Costa Rica, and El Salvador are the countries with active mapping organizations. They are working intensively on their mapping projects and, if all goes well, will have adequate map coverage for the 1950 Census. Only the Dirección General de Estadística of Guatemala has a geographic and cartographic section and it is small.

GUATEMALA

The mapping and surveying work of Guatemala is done in the Departamento de Mapas y Cartografía of the Secretaría de Comunicaciones y Obras Públicas. International boundary surveys are made by the Ministerio de Relaciones Exteriores.

A large-scale topographic map covering the whole country has not yet been produced, although work is in progress. The boundary line with Honduras and that with El Salvador have both been covered by a precise triangulation system which also extends to Guatemala City. A 1/25,000 map was made for the boundary strip with Honduras; and one at the scale of 1/50,000 for El Salvador.

The Departamento de Mapas y Cartografía recently compiled a map at the scale of 1/200,000, in 12 sheets, covering all the country. This map shows approximate topography and locations of main settlements, but was prepared with inadequate basic control.

In 1940, the Middle America Research Institute of Tulane University published a set of maps at the scale of 1/500,000, in 6 sheets, covering the Mayan area. The control basis of this map is not the best. However, the set will serve for an approximate evaluation of the distribution of the numerous Indian groups in Guatemala and other Mayan areas of Mexico and Honduras.

In 1938, the Shell Oil Company photographed the northern part of the country, including the Department of Petén, the west portion of Quiché, Alta Verapaz, and Izabal, on a scale of 1/40,000. It was not possible to find out what kind of map was made from this photography or what control work was used.

About three years ago a Pacific Coast strip, 35 miles in width, was photographed by the United States Navy on a scale of 1/40,000. Portions of the photography are available in Guatemala, but maps based on this photography have not yet been compiled.

From information gathered in Guatemala it was understood that in the central region, where no other air photography was available, trimetrogon photography was taken in 1943 by the United States Army Air Forces, covering the following Departamentos: Huehuetenango, Quiché, Alta Verapaz, San Marcos, Izabal, Totonicapán, Baja Verapaz, part of Quetzaltenango, Zacapa, Sololá, Chimaltenango, El Progreso, Guatemala, Sacatepequez, Jalapa, Chiquimula, and the northern part of Santa Rosa and Jutiapa.

The Inter American Geodetic Survey co-operative project is under way in Guatemala but the work is progressing slowly due to local budgetary difficulties and a serious shortage of trained personnel.

For the 1940 Census no maps were used. Sketch maps, however, were used for the 1945 School Census. These were made by the Dirección General de Estadística, and were revised by the field commission appointed in each municipio. In accordance with the "Ley de Estadística de la República de Guatemala," No. 1820, May 1936, The Dirección General de Estadística has the specific task of studying the "territorio" and compiling departamento and municipio maps. Under this law the Dirección General de Estadística is also in charge of revising the boundaries and recording all changes. Guatemala has legislation regulating the establishment and classification of territorial divisions (civil) and the procedure for changes. In this legislation consideration is given to the clear definition of basic geographic terms. For example, the definitions of "municipio," "distrito municipal," and "municipalidad," as well as "ciudad," "villa," "pueblo," "aldea," "caserío," and so on are indicated. Most of this legislation is in the following laws: Acuerdo Gubernativo of August 2, 1937, Acuerdo Gubernativo of April 7, 1938, and Law 226 or Ley de Municipalidad of April 13, 1947.

At present, Guatemala is divided into 22 departamentos and 311 municipios. The country has 26 ciudades, 29 villas, 256 pueblos, 2079 aldeas, 2180 caseríos and 9894 fincas. Despite the fact that most of the departamento and municipio boundaries are identified in the field by roadside signs, no survey of these has ever been made and, in most cases, their cartographic representation is approximate. The civil boundaries generally follow property lines and physical features (ridges and rivers).

The activities of the Sección de Revisión del Territorio, of the Dirección General de Estadística, is hampered by the lack of basic large-scale topographic maps, resources, and personnel. In spite of these difficulties, a project of mapping the departamentos (mostly at the scale of 1/200,000) and the municipios (at the scales from 1/50,000 to 1/100,000) is being implemented, but necessarily it is progressing very slowly. The maps of these series are very simple and show only the basic information needed for census purposes.

Parallel to the above work, another project of large-scale maps for the main urban centers is being undertaken by the Dirección General de Estadística, but its progress is also slow. The aerial photography available is not being used due to the lack of trained personnel, and especially because of the difficulties in securing such photographs. All of Guatemala has been photographed aerially and this photography could be put to use advantageously for the census.

It is going to be very difficult indeed to have the maps of the 311 municipios (and at least the sketches of 2500 ciudades, villas, pueblos, and aldeas) ready for 1950, because of the limited personnel now available in the Sección de Revisión del Territorio of the Dirección General de Estadística, and because they have so many projects under way at this time, and are not able to utilize the air photography where basic mapping is not present.

Conclusions and recommendations

1. No large-scale coverage is available for the whole country, but a nation-wide mapping project is being implemented with the help of the Inter-American Geodetic Survey. Large-scale topographic maps are available only for the boundaries with Honduras and El Salvador (18 sheets).

2. For the whole country, air photography (vertical and trimetrogon) is available. A study of such photographs should be made in order to use them directly or in map compilation for the municipios, ciudades, villas, pueblos, and aldeas.

3. The Dirección General de Estadística is legally in charge of producing the geographic and cartographic material for census and statistical purposes. It is also in charge of recording the changes in civil divisions and classifications of "localidades," but its work in this field is progressing slowly because of limited funds, personnel, and basic cartographic material.

4. The following recommendations were offered to the Dirección General de Estadística: (a) That it enlarge its Sección de Revisión del Territorio in order to have the basic cartographic work for the 1950 census completed in time; (b) that completion of the legislation defining the geographic terms and procedure in minor civil division changes be accomplished; (c) that it secure technical assistance and the cartographic material available in the country; (d) that it intensify the making of the departamento and municipio maps; (e) that it revise the set of symbols used in the municipio maps to include the main physical features, the location of caserios, fincas, and land in public domain.

EL SALVADOR

There was no agency existing in El Salvador charged with the mapping of the country prior to January of 1947, when the Oficina Cartográfica de la República was created, with some personnel trained in the United States of America. This new mapping agency is being established with the technical co-operation of the Inter-American Geodetic Survey.

The El Salvador-United States co-operative project calls for first-order triangulation, precise leveling, topography by air photography, and compilation at the scale of 1/50,000. It is expected that a very substantial portion of the country will be mapped by 1950 because it is not very extensive and has the added advantage of having good means of transportation.

In addition to the 1/50,000 co-operative project, the Oficina plans another map series at 1/20,000 and a cadastral series at the scale of 1/5,000, in which all rural properties larger than 1/4 hectare will be shown. The Oficina has already started to prepare a geographic map at the scale of 1/200,000 for immediate publication. It has also included in its program a project of census mapping by departamentos, distritos and municipios, which they hope to finish in 1949.

The whole country has been photographed by the Inter-American Geodetic Survey, and prints of this vertical photography, covering about 55 per cent of the territory, are already available in El Salvador. There are 979 photographs at the scale of 1/40,000, and 502 at the scale of 1/17,000.

Conclusions and recommendations

1. No large-scale basic maps are available yet. The Oficina Cartográfica was created recently and is working very industriously.
2. No agency is effectively recording the changes in civil divisions, in spite of the Ley de Estadística which charges the DGE with this task. No classification or definition of geographic terms exist. The DGE should begin all this necessary work as soon as possible.
3. A close co-operation between the DGE, the census agency (to be created), and the Oficina Cartográfica should be promoted so that a set of maps by departamentos, distritos and municipios may be available by 1950.

HONDURAS

The country has no national mapping agency at present, although plans calling for the creation of such an authority are currently being formulated. Honduras has very little cartographic coverage. The only surveyed areas are the boundary with Guatemala, the agricultural properties of the United Fruit Company on the northern coast, the few railway lines and the mining areas of the New York and Honduras Rosario Mining Company. All the mentioned surveys cover small isolated areas and present differences in grade of precision. With the exception of the boundary survey with Guatemala, these surveys are out-of-date.

The best maps available, at present, were produced in co-operation with United States agencies—the revised small-scale aeronautical chart made by the Air Forces, and the Army Map Service 1/250,000 set for all Central America. These maps are preliminary, due to the lack of better field information at the time of compilation. Some trimetrogon photography was taken by the United States Army Air Forces in the preparation of the air chart, and the Pacific and Atlantic coastline have also been photographed.

Honduras is also establishing a mapping commission to co-operate with the Inter-American Geodetic Survey. There is now a movement to revive the Boundary Survey Commission which, however, has very limited funds and no field personnel whatsoever. Thus, until a mapping agency is established, no substantial cartographic work will be done for the 1950 Census. Moreover, the very hostile topography of the country and the lack of adequate means of transportation make all field work very difficult.

Honduras is divided in 17 departamentos, 71 distritos, 1 distrito central, 9 distritos locales, 4 distritos seccionales and 248 municipios. The urban centers are classified by condados (heads of departamentos and other important centers), pueblos, aldeas, caserios, and cantones. No fixed criteria exist for the concept of rural and urban. Each enumerator, according to his own personal judgment, classifies the population as urban or rural.

The Dirección General de Estadística has never used maps in its quinquennial census. In 1936 it published a directory of the territorial divisions then existing. This publication was called "División Político Territorial y Judicial." It is not completely out of date because very few changes have been made in the minor civil division system since then.

Conclusions and recommendations

1. No large-scale maps of the country are available, nor is there knowledge of the aerial photographic coverage of the country; trained personnel is not available and the co-operative Inter-American Geodetic Survey project still is in the beginning stage. There is need for the creation of a national mapping agency.
2. Technical assistance should be made available. Without such assistance very little will be accomplished before the 1950 Census of Honduras.
3. A set of maps by minor civil divisions should be made by the organization which will be responsible for the 1950 Census.

NICARAGUA

The surveying and mapping of Nicaragua was entrusted in 1941 to the statistical organization, but this part of the program has not been set in motion. The tendency now is for the creation of an Oficina de Cartografía y Geografía, probably under the Army. The co-operative mapping project with the Inter-American Geodetic Survey has made imperative the creation of such a mapping agency.

Nicaragua is covered by a 23 sheet topographic map, at the scale of 1/150,000, made in the twenties by the United States Marine Corps, which is now out-of-date and, due to the speed with which it was compiled, was never very accurate. The location of the main cultural and physical features need readjustment and correction.

A school map at the scale of 1/450,000, compiled by the Hermanos Cristianos and printed in France, is widely used for many purposes in Nicaragua. Some surveys have been made by the Departamentos de Carreteras and Ferrocarriles and by the oil companies along the Caribbean. Other surveys have been executed in connection with the Nicaragua Canal project. Most of this work is scattered and difficult to obtain. Some large-scale sketches have been made of small scattered areas for taxation purposes. Complete knowledge of the kind and coverage of the air photography taken is not available.

During the 1940 Census the enumerators were asked to make sketch maps of the areas covered, showing the main physical and cultural features, including dwelling units. These sketches are very rough and could only serve as sources for toponomy in some more elaborate map compilation.

There is a fairly good city map for Managua showing the manzanas (blocks) and houses; this could be improved by using the available air photography.

The "Ley Orgánica de la Estadística Nacional" of 1941 in article 5 letters (b) and (k), charges the Dirección General de Estadística with the responsibility not only for surveying the country but also for printing maps, guides, and gazeteers.

Nicaragua is divided into 15 departamentos and 2 comarcas (these latter have not the same status as the departamentos and are governed by the Guardia Nacional). The departamentos are divided into 123 municipios. Each comarca is equal to a municipio, thus making a total of 125 minor civil

divisions. Within the municipios there are ciudades, aldeas, villas, and caserios. No established criteria exists for the classification of the "localidades pobladas" of the country, nor are there clear definitions for the most common geographic terms. A registro de localidades was begun in January 1947, by the Dirección General de Estadística. The boundary lines of the departamentos follow the physical features for the most part. The municipio boundaries follow the property lines in addition to the physical features. The local mayors are able to describe the approximate jurisdiction (boundaries) of their areas, but actually these have never been surveyed by any methods. No preliminary cartographic work was done for the 1940 Census, and the 1/150,000 map series was of very little use.

Conclusions and recommendations

1. Nicaragua has not yet completed the establishment of its mapping agency. Sufficient trained personnel is not available. The extent of the air photographic coverage is not known. There is, however, a complete but out-of-date topographic coverage at the scale of 1/150.000.

2. The Sección de Gráficos of the DGE should increase its personnel and secure technical assistance in order to produce the geographic and cartographic basis for the 1950 Census. This should include: (a) A set of maps by municipios based on the topographic map at the scale of 1/150,000 and all other available material; (b) a study of the civil division organization of the country and definitions of the most used geographic terms; and (c) examination of the aerial photography available in order to incorporate the information in the maps of the municipios and urban centers.

COSTA RICA

Costa Rica has an Instituto Geográfico Nacional (IGN) established pursuant to a Congressional law, approved in July 1944. The Instituto started to operate in January 1945, and is governed by a "reglamento" approved in June of 1946. The 1944 law charges the Instituto with many tasks in the fields of cartography, geography, hydrography, geology, and related fields. Due to its recent creation it is not yet in full operation, but it does have an active program for the cartographic and geodetic work of the country. There is no other agency charged with mapping activities.

In its short existence the IGN has accomplished the following: (a) Survey and centralization of all geodetic operations available in governmental agencies and private organizations; (b) third-order triangulation in the Province of Guancaste to complete a map of the province, using also the work done by the United States Hydrographic Office at the scale of 1/200 000; (c) third-order triangulation and execution of a map at the scale of 1/50 000 of the eastern side of the Meseta Central; (d) map of the Valle of Turrialba at the scale of 1/50,000; (e) map series of various cantones at the scale of 1/10,000 to 1/20,000. Several cantones have been completed, and the work is progressing.

By the end of 1947 the IGN expects to have completed the maps of 4 of the 7 provinces, and 24 maps of cantones within these 4 provinces, together with 3 cantones of the Province of San José and one of Heredia, making a total of 28 cantones or 70 per cent of the territory of Costa Rica. In 1948, the Instituto expects to finish the compilation of province and canton map for the whole country, based on the surveys and air photography available. The geodetic and leveling work and the photography of the whole country is in progress in co-operation with the Inter-American Geodetic Survey. At the present time about 25 per cent of the country is covered by topographic surveys and an additional 45 per cent by compass traverses.

The provincial and canton maps are of direct interest for the 1950 Census. The province maps are called "físico-políticos." They are good for census control and show much detail such as contour lines; transportation system and type of roads; international, provincial and cantonal boundaries; mountains and volcanos; "cabeceras de cantones," "cabeceras de distrito," "aldeas," "caserios," and "haciendas." However, they are inadequate for enumeration purposes. The provincial maps are not available in printed form, but ozalid copies can be made from the originals.

The canton maps are of large-scale (1/10,000 to 1/20,000). They do not have legends but do show the subdivision of canton, the distritos, rivers, the streets and transportation routes. The cabecera of the canton with its layout is shown in a very sketchy way within the distrito. These maps should be strengthened with the inclusion of the dwellings and farms. A set of urban maps is also needed and could be made from the air photography already available and that to be taken by the IAGS.

In 1942, the DGE published a booklet called the "División Territorial Administrativa." In this publication the minor civil divisions are described in accordance with the "de facto" and not the legal jurisdiction. Costa Rica is divided into 9 provincias, 61 cantones, and about 300 distritos. Most of the civil boundaries shown in the canton maps are approximate.

Conclusions and recommendations

1. Costa Rica's mapping agency is working very intensively. About 60 per cent of the country is covered by some kind of map. The Instituto Geográfico Nacional is compiling maps for the provinces and cantones, which with small adjustments will serve for the 1950 Census.

2. The maps by provinces and cantones now under compilation could be improved if the following were included: (a) A legend; (b) symbols for the main transportation routes different from those used for the streets; (c) some indication of topography; and (d) localization and names of the poblados, caserios, and farms.

3. The IGN should prepare also, in conjunction with the cantonal map project, urban maps incorporating as much as possible of the information available from the aerial photography.

4. Close co-operation should be promoted between the IGN and the DGE for the production of the above maps.

PANAMA

The Republic of Panama does not have a geographic and mapping agency of its own. Consequently, there is no office charged with co-ordinating information on the work done by the Canal Zone authorities, the United States Army, and the United States Navy; and Panama is not in a position to derive full advantage from their activities.

The United States mapped the Canal Zone and surrounding areas at several scales, the most important being the 1/20,000 series. The area surrounding the Canal, portions of the peninsula of Azuero and other scattered points have been surveyed and mapped at the scale of 1/62,500.

The Sección de Caminos of the Ministerio de Obras Públicas and the Sección de Agrimensura and Catastro of the Ministerio de Hacienda have small surveying sections doing topographic work for road building and land measuring and also for the recompilation of some of the mapping done by the United States Army. These sections and the Sección de Construcciones of the Ministerio de Obras Públicas have made city maps of some of the most important urban centers. The lack of co-ordination in the work being done is

apparent. Due to the nonexistence of mapping organizations, the Sección de Caminos serves as the contact agency with the United States mapping authorities. This Office does not have trained people and is not primarily concerned with mapping.

The creation of a mapping agency to co-operate with the United States authorities and to be in charge of the cartographic work of the Republic is not the solution in this case, but will help very much in all future map-making including that for census purposes. Thus, besides the plan which was drafted for the creation of an Instituto Nacional de Geografía y Cartografía, a plan with the minimum cartographic requirements for the 1950 Census was suggested to the DGE.

The present territorial division of Panama includes 9 provinces and 62 distritos. Although the boundaries are not precisely located and described, they run mostly along physical features which can be mapped without much difficulty. The last census did not have a good cartographic basis, but sketches

SUMMARY FOR CONTINENTAL CENTRAL AMERICA

		Guatemala	El Salvador	Honduras	Nicaragua	Costa Rica	Panama
Kind of Mapping Organization		Civil	Civil	None	None	Civil	None
Approximate per cent of available basic large-scale maps	Scale of 1/100,000 or larger	IB	IB	IB	100%	60%	40%
	Scale of 1/100,000 to 1/250,000	100%	100%	100%	100%	100%	100%
Small-scale maps	1/500,000	—	—	—	—	—	—
	1/1,000,000	100%	100%	100%	100%	100%	100%
Air photography available	Vertical	60%	100%	25%	AV?	AV?	AV?
	Trimetrogon	40%	100%	AV?	AV?	AV?	AV?
Rural cadastral maps available	Adequate surveys	—	—	—	—	—	—
	Sketches	10%	—	—	?	?	—
Urban cadastral maps available	Adequate surveys	10 LC	8 LC	7 LC	2 LC	4 LC	2 LC
	Sketches	Yes	Yes	—	Yes	Yes	Yes
Minor civil division (M.C.D.) maps		PP	—	—	—	PP	—
Field monomentation of boundaries (M.C.D.)		RO	RO	—	—	Partially	—
Effective legislation regulating M.C.D.		Yes	—	—	—	—	—
Geographic and cartographic unit in statistical system		Yes Small	—	—	—	—	—
Civil divisions for July 1947 (approximate)	Major	Depart. 22	Depart. 14	Depart. 17	Depart. 15 Comarcas 2	Provincias 9	Provincias 9
	Secondary	—	Distrito 38	Distrito 85	—	Cantones 61	—
	Minor	Munic. 311	Munic. 260	Munic. 248	Munic. 123	Distrito 300	Distrito 62

Symbols used in table:

AV — Available.
IB — International Boundaries.
LC — Larger Centers.
PP — Project in Progress.
RO — Roadside in Progress.
? — Unknown Coverage.

with roads and buildings were given to the enumerators. The sketches are available and should be used as source material for the compilation of the distrito maps.

Conclusions and recommendations

1. No specialized agency is in charge of mapping activities in Panama. The Canal Zone authorities and United States agencies have mapped substantial areas of strategic interest at the scale of 1/20,000 and 1/62,500.

2. No adequate maps for census purposes have ever been made to cover the whole country. No control and record on the status of the territorial divisions exists, and no clear definitions of the geographic terms is available.

3. It is recommended that the DGE create a section in charge of compiling the geographic and cartographic material needed for 1950. First priority should be given to a project for the compilation of a set of maps by distritos, using all available material, and if possible, with the technical assistance of the Canal Zone authorities and United States agencies operating there.

CARIBBEAN CENTRAL AMERICA

Caribbean Central America includes the Dominican Republic, Haiti, and Cuba. These three countries have complete large-scale topographic coverage mostly based on control of third-order accuracy and cultural features now out-of-date. They have complete vertical and trimetrogon coverage which could be used with advantage for census purposes. In this group, Haiti is the only country without a mapping agency.

DOMINICAN REPUBLIC

Mapping work in the Dominican Republic is under the Instituto Geográfico y Geológico (IGG) of the Universidad de Santo Domingo. This Instituto was recently created, and implements the map projects of the Comisión de Límites. The IGG has about 100 employees and is co-operating intensively with the Inter-American Geodetic Survey mapping project.

It also has a small section of geographic studies which is now engaged in organizing a research program on geographic names of the Republic.

The country has topographic maps made by the United States Marine Corps around 1922-1923, at the scales of 1/21,120 and 1/63,360. The larger scale set (1/21,120) covers scattered parts of the Provinces of Puerto Plata, Espaillat, Santiago, Monte Cristi, La Vega, Pacificada, Santo Domingo, Macorís, and Seibo. The 63,360 set covers all the country; however, great portions of the western sheets are blank. Both sets are considered inaccurate. The control and topography are not good, and the culture is out-of-date. In the absence of better material, the above-mentioned sets will serve as a basis for making comunas and secciones maps for census purposes. The Republic is covered by aerial photography (vertical and trimetrogon pictures at 1/40,000).

The Dirección de Mensuras Catastrales is preparing cadastral plans of the rural properties and is reducing them to uniform scale and adjusting them to Comunal and Sectional maps. The work for about half of the country is already completed. There are maps for the main towns but a program of cadastral maps for the main settled areas is needed.

According to Law No. 125 of May 1939, and its amendments, the country consists of one Distrito Nacional, 18 provincias, 66 comunes, 1595 secciones and 14 distritos municipales, also divided into secciones.

DETROIT PUBLIC LIBRARY

No complete set of maps exists for the provincias, comunes, and secciones, but the jurisdictional area for each minor civil division is known by the regional authorities. There is a plan for making the maps by provincias, comunes, and to the extent possible by secciones for the 1950 Census.

Inasmuch as the same individual is head of the statistical organization and of the Comisión de Límites, the work of the statistical and mapping organizations is smoothly co-ordinated.

Conclusions and recommendations

1. The Dominican Republic has a mapping agency and a Dirección de Mensuras Catastrales, both working intensively. There is an out-of-date large scale topographic coverage of the country and also vertical and trimetrogon photography, but maps for census purposes are not available.

2. It is recommended that the Consejo Nacional de Estadística promote more effective co-ordination and co-operation between the Instituto Geográfico y Geológico, the Dirección de Mensuras Catastrales, the Comisión de Límites and the Dirección General de Estadística, in order to produce maps for Provincias, Comunes, Secciones and the urban centers, in time for the 1950 Census.

HAITI

The Republic so far has not established an agency authorized to do the mapping work for the country, although the Service d'Études et Levés Topographiques et Géodesiques was operative during the thirties.

In 1919 the United States Geological Survey did some triangulation work. Between 1932 and 1936 the Département de Travaux Publiques, through the Service mentioned above, continued this control work, which is considered, in general, of third-order accuracy. In 1922 the Department published a topographic map at the scale of 1/100,000 in 13 sheets, based on the control mentioned. It has not been revised. Most of the mapping work in the country was discontinued in 1938.

The IAGS, in co-operation with Haiti, is executing the first-order triangulation and precise leveling for most of the country. The photography is already completed at the scale of 1/40,000. Within a few years all of the country will be mapped at the scale of 1/50,000.

The country is divided into 5 provinces, 27 "arrondissements," 104 communes and 551 sections rurales. (Other sources of information give 120 communes.) The communes and sections are very small units.

With the available material and the co-operation of the IAGS, it is possible to make at least a series of census maps, by communes, without much difficulty. However, no agency is in charge of the statistical and census work of the country and therefore this preliminary map work has not been initiated. The Service d'Études et Levés Topographiques has no direct interest in this kind of work.

Conclusions and recommendations

1. No active national mapping or statistical agency exists in Haiti nor is there any personnel available. There is an out-of-date large-scale topographic map at the scale of 1/100,000 and complete aerial photographic coverage (vertical and trimetrogon). No maps or any geographic study have been made for census purposes.

2. The creation of mapping and statistical agencies is recommended in order to assume responsibility for this kind of work for the whole country.

3. For the 1950 Census, the use of the available cartographic material is specifically recommended for the compilation of a set of maps by communes and sketches for the Sections. Technical assistance should be secured for this task, and personnel should be trained.

CUBA

There are two mapping commissions in Cuba; the Comisión Topográfica del Ejército and the recently created Comisión Geodésica, under the Secretaría de Agricultura.

The Cuban Army made a map at the scale of 1/100,000 in 1932, for the eastern portion of the Republic, and in 1941 completed the western side. This map is an up-to-date reduction of the one made in 1921 with United States

SUMMARY FOR CARIBBEAN AND CENTRAL AMERICA

		Dominican Republic	Haiti	Cuba
Kind of Mapping Organization		Civil	None	Civil Military
Approximate percent of available basic large-scale maps	Scale of 1/100,000 or larger	100%	100%	100%
	Scale of 1/100,000 to 1/250,000	100%	100%	100%
Small-scale maps	1/500,000	—	—	—
	1/1,000,000	100%	100%	100%
Air photography available	Vertical	100%	100%	100%
	Trimetrogon	100%	100%	100%
Rural cadastral maps available	Adequate surveys	50%	—	—
	Sketches	—	—	—
Urban cadastral maps available	Adequate surveys	LC 3	LC 1	LC 5
	Sketches	—	—	—
Minor civil division (M.C.D.) maps		PP	—	100%
Field monumentation of boundaries M.C.D.		—	—	—
Effective legislation regulating M.C.D		—	—	Partially
Geographic and cartographic unit in statistical system		—	—	Yes
Civil divisions for July 1947 (approximate)	Major	Provincias 18 Distrito Nacional 1	Provincias 5	Provincias 6
	Secondary	Communes 66	Arrondissements 27 Communes 104	Municipios 126
	Minor	Secciones 1350	Sections Rurales 551	Barrios 1197

Symbols used in table:
LC — Larger centers.
PP — Project in progress.

help, at the scale of 1/62,500. Both series cover all the country. Yet they were not made in accordance with the best standards and the control work is of third-order accuracy.

The Departamento de Planos y Gráficos of the Oficina Nacional del Censo (population) produced for the 1943 Census a set of maps by municipios, in which the municipio and barrio boundaries are shown. The basic material used was the Army 1/100,000 topographic map together with the information furnished by the mayors of the municipios. The drafting and compilation work is faulty. The scale varies from about 1/50,000 to 1/250,000. The barrio and municipio lines were drawn based on sketches furnished by local people. The municipio set was published as an appendix to the 1943 Census in atlas form.

The Inter-American Geodetic Survey is starting its activities in Cuba. Close co-operation between the statistical agencies and this organization would be mutually beneficial in the interest of improving the already existing cartographic material.

The country is divided into 6 Provinces and 126 municipios. This status can be altered by a law of the National Congress. The municipios, organized by law of the National Congress, are divided by law into barrios. The number of these is given as 1,213 in the 1943 Census, although the director of the Oficina Nacional del Censo advised that there are currently only 1,197. The barrios legislation is fixed in the Electoral Code, article 164. The barrios can change their status only every 10 years, after each census. This law provides that no urban barrio may have more than 5000 inhabitants or fewer than 1000. Few exceptions are made. Barrio changes are made by the director del Censo and the mayors of the municipios.

Conclusions and recommendations

1. Based on the 1/100,000 topographic map, published by the Estado Mayor del Ejercito, the Census Office produced in 1943 a small-scale atlas of municipio maps with barrio boundaries and enumeration zones. This atlas needs revision; the scale should be enlarged, and a standard set of symbols incorporated, together with the available information from recent surveys and from aerial photography.
2. A project for the making of urban maps using aerial photographs as a basis should be undertaken by the census agency for 1950.
3. Co-ordination of the statistical organization with the map-making agencies is necessary.

NORTHERN SOUTH AMERICA

Venezuela and Colombia are the countries of this region. Their problems are similar and they are materially better equipped for mapping work. In spite of the resources available, the large-scale coverage is small and only a small percentage of the territory has been photographed. The statistical organizations of the two countries do not have geographic or cartographic units.

VENEZUELA

The main mapping work of Venezuela is done by the Departamento de Cartografía Nacional (DCN) of the Ministerio de Obras Públicas. This organization is well equipped with field and photogrammetric instruments.

Many mapping projects have been carried out by the oil companies; others are still under way. During the war a trimetrogon project of air routes was accomplished in co-operation with the Hydrographic Office of the United

States Navy. This was later revised, and the work is being incorporated into the general mapping program of the country.

The program of the DCN, which is being reorganized, calls for a map of the country at 1/100,000 and some regions at 1/25,000 and 1/250,000. So far the 1/25,000 series covers scattered areas and represents only a very small percentage of the total territory—about 3 per cent. It includes the whole Federal District and the States of Miranda and Nueva Esparta. The latter was prepared in 1946 as a joint Venezuela-United States project. The rest of the 1/25,000 series is of areas in the States of Sucre, Anzoategui, Gúarico, Lara, Zulia, Trujillo, Tachira, and along the boundary with Brazil in the State of Bolívar.

The present status of photogrammetric compilation for maps at the scale of 1/100,000 and 1/250,000 with less precise control covers parts of the States of Zulia and Falcon and most of Aragua, Gúarico, Anzoategui, Monagas and Delta Amacuro Territory (about 30 per cent). In 1949, the DCN hopes to cover most of the western areas where no photography or control are available. No projects have been made yet for the State of Bolívar and the Territory of Amazonas.

Venezuela has 20 states, a Federal District and 2 territories. For census purposes the dependencias federales are considered as units. The states are divided into 173 distritos, and the distritos into 660 municipios. No civil division maps are available. The boundaries of the civil divisions are described and with a good base map could be approximately marked, but the problem is their demarcation in the field. The DCN is undertaking a project for distrito maps. The Dirección General de Estadística should co-operate in this project so it could serve for the 1950 Census. If possible municipio maps should also be made. For the 20 state capitals and federal districts, fair urban maps which need to be brought up-to-date are available. For the clustered isolated settlements and urban areas other than the capitals, maps are needed. The aerial photography available and the resources of the country will make it possible to obtain a good cartographic basis for 1950.

No clear definitions of the geographic terms are known and no agency is effectively recording the current situation and changes in minor civil divisions.

Conclusions and recommendations

1. Venezuela has a fairly well equipped mapping agency which so far has covered a small portion of the country with large-scale maps. The petroleum companies also have mapped substantial areas. A mapping project by distritos is progressing slowly.

2. The Dirección General de Estadística does not have a geographic or cartographic section. Adequate maps were not used in the last census. Definitions of geographic terms and clear delimitation of the minor civil divisions were not made.

3. Close co-operation between the Dirección de Cartografía and the Dirección General de Estadística is recommended in order that the cartographic material available may be used for the 1950 Census. The Dirección General de Estadística should co-operate with the Dirección de Cartografía in intensifying the mapping project for distritos, the making of maps by municipios, and the production of the necessary urban maps.

4. The Dirección General de Estadística should establish a Sección de Geografía to control the geographic work needed and to co-operate with the Dirección de Cartografía Nacional.

COLOMBIA

The Republic of Colombia has its mapping work centralized in the Instituto Geográfico Militar y Catastral (IGMC), an agency under the Ministerio de Hacienda. The Instituto Geográfico Militar y Catastral has a Consejo

Directivo made up of the ministro de Hacienda, ministro de Guerra, ministro de Economía, director of the Institute and the chief of scientific research of the latter. The Instituto has a branch in each department. The IGMC is in charge of many activities, but its main work is in the mapping field. It is well organized. Currently it is working mainly in the Cordillera region, where most of the population and about 80 per cent of the municipios are located. The organization is well equipped but its work is hampered because of the adverse natural conditions (about 120 photographic hours a year).

About 20,000 square kilometers at the scale of 1/25,000 have been mapped. The 1/25,000 series is being considered as preliminary for the "Carta General de la Republica" at the scale of 1/100,000. The tendency is to discontinue the 1/25,000 series for the whole country. At the beginning, the sheets were published by municipio and 29 sheets of the municipios of the Departamento de Cundinamarca have been published. The series of municipio maps published by the IGMC are ideal for census work. This method of publishing the "Carta" was changed for the system of 8′ x 5′ sheets which also show the minor civil divisions.

The Oficina de Longitudes of the Ministerio de Relaciones Exteriores made a series of maps by departamentos, based on astronomic positions, at the scale of 1/500,000. This series cover 15 departamentos and is dated from 1928 to 1941. It does not cover most of the intendencias and comisarias of the eastern portion of the country (Amazonic). It is a good example of this type of map, but needs revisions. It will be very useful for compilation of census maps but cannot be used directly because of its small scales and because certain sheets are too old, such as those for the Departamentos of Narino, Caldas, Tolimoa, Huila, Valle del Cauca, Choco, and North of Santander. The Oficina also issued a map at the scale of 1/1,000 000 and another at 1/2,000 000 for the whole country. Today the Oficina de Longitudes serves as a consulting office for the Ministry of Foreign Affairs on international boundary questions.

The petroleum and banana companies did some work for their own purposes. The Inter-American and Geodetic Survey project is still in the planning phase.

The time available for preparations for the 1950 Census and the cartographic data at hand in the country do not permit the production of precise large-scale maps for the whole country similar to those of a few municipios of the Departamento de Cundinamarca. The most practical solution would be the compilation of a set of municipio maps using all the cartographic and geographic information available in the country. The Dirección Nacional de Estadística (DNE) is not technically prepared to do the work; and, excluding the personnel of the IGM, trained personnel is not available in the country. The DNE does not have geographic and cartographic sections. The development of close co-operation between the two mentioned agencies is desirable, and the following arrangement between them was promoted: (a) The IGM should create a section of Compilación Cartografica for the primary purpose of producing the maps needed for the 1950 Census. For the first three years (1947-1949) this section would be mostly financed by the census. (b) The DNE should create a section of "Territorial Divisions" to be in charge of the geographic and cartographic basis of the census, and also to work in close co-operation with the IGM. Its staff would be small.

The country is organized by departamentos, intendencias nacionales, and comisarias. The last two political units are administered directly by the

Central Government. The larger civil divisions are divided into municipios, and these into corregimientos, veredas, and caserios. Only about 100 of the 801 municipios have their boundaries surveyed. All the rest can be approximately marked on a map because they follow, for the most part, physical features or property lines. The changes in municipio organization are not very frequent. Of the 807 municipios registered by the Census in 1938, only

SUMMARY FOR NORTHERN SOUTH AMERICA

		Colombia	Venezuela
Kind of Mapping Organization		Civil	Civil
Approximate per cent of available basic large-scale maps	Scale of 1/100,000 or larger	3%	5%
	Scale of 1/100,000 to 1/250,000	?	20%
Small-scale maps	1/500,000	80% BS	—
	1/1,000,000	100%	100%
Air photography available	Vertical	7%	25%
	Trimetrogon	AV?	AV?
Rural cadastral maps available	Adequate surveys	3%	—
	Sketches	Partially	—
Urban cadastral maps available	Adequate surveys	10 LC	7 LC
	Sketches	—	—
Minor civil divisions (M.C.D.) maps		3%	PP
Field monumentation of boundaries M.C.D.		10%	—
Effective legislation regulating M.C.D.		Partially	—
Geographic and cartographic unit in statistical system		—	—
Civil Division for July 1947 (approximate)	Major	Departamentos 15 Commissarias 5 Interdencias 4	Estados 20 Territories 2 Distrito Federal 1
	Secondary	Municipios 801	Distritos 173
	Minor	Corregimientos 1242	Municipios 660

Symbols used in table:
AV — Available.
BS — By states.
LC — Larger centers.
PP — Project in progress.
? — Unknown coverage.

801 exist today. The corregimientos and veredas change more frequently, in accordance with the wishes of the local "consejos"; whereas, for the municipio and larger political units, the changes may only be made by the national legislative body.

The DNE reportedly, in the Census of 1938 produced maps for the 807 municipios showing communication lines, the approximate minor civil division boundaries, the "relative" location of the populated places and notes on time of traveling from the municipios to the capitals of departamentos. Presumably most of these maps were lost. In accordance with the report of the contralor general in 1938, Colombia had, at that time, 807 municipios, 1242 corregimientos and 18,552 populated places (veredas y caserios). The official data for 1945 shows 801 municipios, but no information is available at present on the numbers of corregimientos, veredas y caserios.

Conclusions and recommendations

1. Colombia has a fairly well equipped mapping organization which already has mapped about 2 per cent of the territory at the scale of 1/25,000; has surveyed about 10 per cent of the municipio boundaries, and photographed limited areas of the Cordillera region. There are city maps for the capitals of the departamentos.

2. The Dirreción Nacional de Estadística does not have a cartographic section and does not use maps to the extent needed in its work. Some sketch maps made by local teachers are available but they are not suitable for use as basic material.

3. It is recommended that the Dirección Nacional de Estadística create a cartographic section and also promote close co-operation and co-ordination between the Instituto Geográfico Militar y Catastral and the Oficina de Longitudes, in order to produce a set of maps by municipios for the whole country, and by corregimientos for the most important regions, together with essential urban maps.

(To be continued in *Estadística* No. 19)

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EL PAPEL FUTURO DEL IASI EN LAS ESTADISTICAS INTERNACIONALES*

POR HALBERT L. DUNN, U. S. A.†

SUMMARY

The future of IASI depends upon four factors. These are: (1) The objectives of the Institute; (2) its philosophy and working relationships; (3) its financial support; and (4) its relation to other international organizations.

The two chief and immediate problems which face the organization are: (1) Adequate financial support, and (2) proper recognition in a strengthened Inter-American System. In all likelihood, these problems are interlinked.

If these problems can be solved, the future of IASI is bright. The organization is sturdy and dependable. Its philosophy and working relationships have been proved. The needs for its services are very great.

El futuro del Instituto Interamericano de Estadística es, para mí, una meditación atormentadora. Sin embargo, resistiré la tentación a "contemplar la estrella" y manifestaré en pocas palabras, "bajando la mirada a la realidad," una opinión de lo que me parece que se tiende ante la organización.

Comencemos con un resumen de lo que el IASI ha logrado durante sus siete años de vida hasta el presente. Se requirió cerca de dos años y medio para dar principio a la organización, establecer un programa y crear una pequeña secretaría. La revista trimestral "Estadística" se publicó por primera vez en el otoño de 1943.

La primera edición del Directorio del Personal Estadístico fué impresa en 1944, y se comenzó a trabajar en la Bibliografía de Fuentes Estadísticas. En este mismo año, fué hecha por Arca Parro, del Perú, la proposición para un censo de las Américas en 1950—un reto que agitó la imaginación de los estadísticos de todo el Hemisferio Occidental.

Fué durante ese mismo año que nuestro Honorable Presidente del Instituto, Texeira de Freitas, del Brasil, inició por primera vez el principio de una "rotación del cuerpo profesional" para dirigir el programa técnico del IASI. Esto significa que el cuerpo técnico del Instituto, hasta ahora ha sido obtenido principalmente de Latino América por medio del sistema de conseguir de sus gobiernos personal estadístico altamente competente—especialistas en campos seleccionados de la materia—para períodos de uno o dos años de servicio en la oficina Permanente del Instituto.

En 1945 se comenzó a trabajar intensivamente en una clasificación del comercio exterior. También fueron emprendidos estudios sobre la renta nacional de las naciones americanas, y fué desarrollado cooperativamente un plan para un anuario estadístico interamericano.

Las actividades del Instituto durante los años 1946 y 1947 se ampliaron en alcance e intensidad. Esto se hizo posible por medio de presupuestos mayores en esos años. Además de adelantar los proyectos ya comenzados, se

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* Documento leido en la reunión conjunta del Instituto Internacional de Estadística, la Sociedad Econométrica y el Instituto Interamericano de Estadística, en su reunión del 16 de Septiembre de 1947, en Wáshington, D. C.

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iniciaron investigaciones en los campos de estadísticas agrícolas, estadísticas industriales y de minas, educación estadística, estadísticas educacionales, sistemas de estadísticas de comercio exterior, y estadísticas vitales. Tal como fué demostrado por el memorandum y documentos expuestos ante ustedes durante esta primera sesión de la organización, se ha hecho un verdadero progreso en estos varios programas.

Con esta breve ojeada hacia atrás, ocupémosnos del tema del papel del IASI en el futuro.

En mi opinión, el futuro del IASI depende de cuatro factores. Estos son: (1) Los objetivos del Instituto; (2) su filosofía y relaciones de trabajo; (3) su sostenimiento financiero; y (4) su relación con otras organizaciones internacionales.

1. Los objetivos del IASI están establecidos ya en sus estatutos. Todos ellos se dirigen al fomento del desarrollo estadístico en el Hemisferio Occidental. El Instituto busca: (a) Estimular el mejoramiento de la metodología en la colección, tabulación, análisis y publicación de las estadísticas oficiales y no oficiales; (b) fomentar medidas tendientes a mejorar la comparabilidad de las estadísticas sociales y económicas entre las naciones de este hemisferio; (c) proveer un medio para la colaboración estadística profesional entre estadísticos de este hemisferio; y (d) cooperar con organizaciones nacionales e internacionales, especialmente con el Instituto Internacional de Estadística, en el adelanto de la ciencia y la administración estadísticas.

Estos objetivos no son únicos. Prácticamente cada organización internacional que tenga una división estadística ha hablado de mejorar las fuentes nacionales de los datos estadísticos. Lo que hace importante los objetivos del Instituto es que ellos son los *únicos* objetivos de la organización. Ocupan el principal lugar entre los intereses del Instituto. Están reflejados en *cada* proyecto del IASI. Son *inherentes* a las relaciones de trabajo del Instituto con su "cuerpo rotatorio profesional." Están *entrelazados* con la filosofía básica del trabajo del Instituto.

2. Esto me trae al segundo factor sobre el futuro del IASI—su filosofía y relaciones de trabajo. La organización ha desarrollado y mantenido consistentemente una política de formar y adaptar su propio programa a los intereses y actividades de las distintas organizaciones y grupos con los cuales está asociada. Sus proyectos han provenido realmente de las necesidades de las organizaciones y de las naciones en sí. Sus métodos de trabajo exigen un máximo de participación de técnicos nacionales en el programa que vaya a realizarse.

Estos principios son prácticos y básicos. Durante el pasado, frecuentemente las organizaciones internacionales han delineado normas con el único resultado de haber sido ignoradas por los técnicos dentro de la nación. Pero lo importante es que dichas normas sean usadas. La relación de trabajo fomentada entre el Instituto y los técnicos nacionales consiste en la participación en las etapas de formulación y planeamiento. Si el programa internacional surge como un esfuerzo cooperativo de conjunto, aquellos que participen en él harán lo sumo para conformarlo a sus naciones.

Hay una elasticidad y adaptabilidad en tal filosofía de trabajo que auguran un buen futuro para el IASI. Es fácil comprender cómo la estructura del Instituto, o su programa de coordinación y desarrollo sea adaptable y productivo respectivamente, siempre que los técnicos nacionales que trabajen en problemas corrientes participen activamente en el programa.

3. El futuro mantenimiento financiero del IASI depende casi completa-

mente de la ayuda dada por los gobiernos participantes. Actualmente, todas, excepto cinco de las 22 naciones americanas, son miembros gubernamentales del Instituto que pagan puntualmente. Las cuotas de las 5 naciones no miembros, en conjunto, ascienden solamente a un 4 por ciento del total potencial de las cuotas gubernamentales.

Esto parecería ofrecer un aspecto bastante satisfactorio con referencia al presupuesto anual del IASI. Pero, nubes de tormenta aparecen a la vista. Por todo el mundo han venido naciendo organizaciones internacionales; todas con fuertes intereses estadísticos. Estas organizaciones son costosas y con el tiempo lo serán mucho más si ellas han de mantener secretarías eficientes, y si han de hacer los trabajos para los cuales han sido destinadas. Es natural que el presupuesto de cada organización internacional será discutido por las naciones sostenedoras. Su utilidad debe ser rejustificada anualmente a fin de mantener la ayuda gubernamental existente.

Por el momento, el programa del IASI está sufriendo la necesidad de más fondos. Cuando menos, dos de los proyectos del IASI, de acuerdo con las recomendaciones de la Comisión, deberían tener un presupuesto anual que se aproxime al total del presente presupuesto gubernamental del propio IASI. Estos proyectos son: El Censo de las Américas de 1950, y el programa para mejorar la educación estadística. La cuota para el trabajo regular del Instituto también necesita ser aumentada.

La efectividad del IASI en el futuro depende grandemente de si su presupuesto va a ser aumentado, mantenido o reducido. Las esperanzas para el futuro a este respecto parecen depender grandemente del resultado de las conferencias a que se enfrentan las naciones americanas, es decir, si el sistema interamericano va a ser fortalecido o nó.

4. Mi propia opinión acerca del factor final sobre el cual depende el futuro del IASI, i.e., su relación con otras organizaciones internacionales, nace directamente de una consideración: del apoyo financiero requerido. Como yo lo veo, el IASI deber llegar a ser el brazo estadístico del sistema interamericano si es que su trabajo ha de continuar y prosperar. El sistema interamericano necesita esa agencia estadística. Los principios del trabajo y los éxitos del Instituto justifican completamente la confianza depositada en él para llevar a cabo esta gran tarea. Debiera parecer antieconómico para los gobiernos americanos tomar cualquier otro rumbo que no sea el de utilizar al Instituto en esta condición.

Si uno acepta esta conclusión, la relación del IASI con todas las demás organizaciones internacionales estará influenciada en sumo grado por este factor. Sin embargo, las relaciones flexibles de trabajo que fomenta y mantiene el IASI deberían hacer de ello una cuestión relativamente simple para ajustar su programa técnico con el del Instituto Internacional de Estadística, con los servicios estadísticos de las Naciones Unidas, y de los agencias especializadas.

Para terminar, permítaseme afirmar mi fé en el papel futuro que jugará el IASI en las estadísticas internacionales. Los dos principales e inmediatos problemas con que se enfrenta la organización son: (1) Ayuda financiera adecuada y (2) reconocimiento apropiado en un sistema interamericano fortalecido. Con toda probabilidad estos problemas están eslabonados.

Si estos problemas pueden ser resueltos, el futuro del IASI es brillante. La organización es firme y digna de confianza. Su filosofía y relaciones de trabajo han sido probadas. La necesidad de sus servicios es muy grande.

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WHY A WORLD CENSUS OF AGRICULTURE IN 1950

By Robert H. Coats*

RESUMEN

Entre las actividades de la FAO, se han venido concediendo preferencia a las que tratan de proporcionar un sistema de estadísticas agrícolas mundiales, amplio y digno de confianza. El sistema comprende dos partes: Primero, se ha iniciado la elaboración de un informe mensual de las estadísticas más importantes sobre la producción y dístribución agrícola y de alimentos. En segundo lugar, se ha acometido, como base necesaria, una investigación o inventario extenso, que cubre los datos permanentes de la agrícultura. Mediante estas actividades, la FAO ha realizado, con mayores facilidades, el trabajo llevado a cabo anteriormente por el Instituto Internacional de Agricultura.

Se redactaron los planes para el proyectado Censo Mundial previa consulta con numerosos expertos y con otras organizaciones internacionales. Dichos planes fueron sometidos a la consideración de las naciones miembros y a tres conferencias internacionales de agricultura y de estadísticos, en Roma, Londres y Wáshington, respectivamente. La última de ellas estuvo integrada por delegados de los países del Hemisferio Occidental reunidos bajo los auspicios del Instituto Interamericano de Estadística.

En resumen, el Censo cubrirá estos aspectos: Tierras agrícolas y su utilización; existencia de ganados; edificios de la explotación agrícola y equipo; producción y renta agrícola en el año censal; y las condiciones sociales del agricultor. La silvicultura y la pesca serán consideradas por separado.

Cada nación miembro de la FAO determinará su sistema censal. La FAO proyecta instalar algunos centros de entrenamiento del personal censal, uno de los cuales se establecerá en Latinoamérica.

Existen tres razones para el levantamiento del Censo—estadística, económica y política. Entre las razones económicas se señalan el empleo "práctico" e inmediato de los resultados por parte de los siguientes grupos: Agricultores y sus organizaciones; agencias de mercados; empresas de transportes; manufactureros y negociantes mayoristas y minoristas; agentes bancarios y financieros; el público en general; oficinas gubernamentales. Respecto a estas últimas, los datos del Censo tendrán un valor especial para la formulación de la política económica interna, lo mismo que para considerar la agricultura local en su amplitud internacional.

En el enfrentamiento al problema de la reconstrucción de postguerra, en la cual el abastecimiento de alimentos y la elevación de los standards alimenticios constituyen materias principalísimas, un Censo Agrícola Mundial es una de las empresas más necesarias de la hora actual.

The countries which joined together to form the Food and Agriculture Organization of the United Nations by that act expressed their determination to raise levels of nutrition, to improve the production and distribution of food and other agricultural products, and in general to better the conditions of their rural populations. To carry out these purposes, many and various services have been undertaken by the Organization. At the outset, and basic

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to almost all its programs of more than limited or technical scope, a comprehensive and reliable system of statistics is obviously indispensable. Provision for it, therefore, has been given a premier place amongst FAO activities.

In covering statistically a far-extending and exceedingly varied field of production like agriculture, it is usual to employ two main approaches. (Though overlapping and having a single objective, the differing concepts and methods that are often involved make it convenient to regard the two separately.) First, we must establish a running record of the more salient features of the production and distribution process from month to month, or even, during crucial periods, at more frequent intervals. This calls for a system of more or less continuous observation. It involves keeping in more or less constant touch with such facts as the acreages being planted from time to time to food and other crops; the progress of growth under prevailing weather conditions; the yields of such crops, both prospective and as they come to harvest; the condition of livestock and the numbers being bred and slaughtered; the current dairying output; the movement of agricultural products to market and the conditions surrounding such movement, notably prices; with other phenomena of similar type too numerous for detailed mention. But secondly, in order to give such information significance and coherence, certain other data of a basic and "background" character, less subject to rapid change, are equally vital. These include not only summary figures of the completed year's production, stocks in hand, etc., but also and more particularly an appraisement of the agencies employed in production—lands in use or available for crops, farm buildings and equipment, machinery, horses and other "capital" animals, farm population and labor, farm credits, farm tenures, etc.—in short, a general inventory and evaluation of agricultural assets, potential as well as actual, of a kind which the above-mentioned method of observation, concentrating as it does on dynamic features, does not always adequately provide. Such are frequently though not invariably obtained by means of a periodical census or all-round survey of agriculture—in cross section and static, as it were.

To borrow the language of commercial bookkeeping, we require not only a set of daybooks and journals for the recording of outputs, sales, and other important developments and transactions as they occur, but also a periodical stock taking, the latter for the complete envisagement and understanding of the *status quo*, or still more for long-range planning and advance. In agriculture, what as a rule are briefly termed the "crop-reporting" services constitute the daybooks of the statistical scheme, and the role of stock taking is played by the census—a particularly important role in times of change and crisis. The Census of Agriculture which it is now proposed should be taken by as many countries as possible in 1950-51, is thus an integral part, if not, under circumstances to be presently detailed, the cornerstone, of the international statistical edifice to which FAO has set its hand.

A GLANCE BACKWARD

The movement to establish agricultural statistics on an international scale dates back to the beginning of the present century. As a matter of fact the need was recognized and even officially formulated nearly a hundred years ago. Between 1853 and 1876, a series of nine international congresses of statesmen, statisticians, political scientists, and others took place in Europe, at four of which the problem was discussed, followed on all four occasions by

resolutions strongly recommending concerted action. Again, during the final quarter of the nineteenth century, 10 international conferences exclusively devoted to agriculture met in Europe, at a late one of which, after several previous exchanges of views, the project of an international clearinghouse for statistics was mooted and approved. (A somewhat loosely conceived "Confederation of Agriculture" had been formed in 1891 for the promotion of such meetings.) Meanwhile the International Institute of Statistics, founded in 1885, had placed the subject more than once on its agenda. It was not, however, until 1905 that definite steps were taken to implement these numerous pronouncements, particularly the one looking to an international clearinghouse for statistics. How the latter came at last to be realized is a story of unusual significance, human as well as economic and political in its interest, for the decision was largely due to the initiative and persistence of a single individual —one of the arresting personalities of the generation immediately preceding our own, ranking indeed among its outstanding idealists and men of action.

David Lubin, born in Poland (1849) but brought up on the East Side of New York, was one to whom success in business based on a strict integrity, an intuitive grasp of economic problems, and a profound sense of the duty of service, appears to have been second nature. Apprenticed to the jewelry trade, he early drifted to California where at the end of a few years, by methods then as novel as they were sound, he amassed a considerable fortune in general storekeeping. As an investment he had purchased a farm and fruit ranch. At this juncture, however, an unusual experience overtook him. He found that although in previous ventures he had achieved a uniformly satisfactory, sometimes even a notable, success, in farming notwithstanding every device that he could muster he periodically encountered actual losses. There were certain lions in the immediate path which with characteristic energy Lubin set himself to attack. In the final analysis, however, whereas he could estimate and in a measure provide against disabilities of a local or even national origin, his foundational difficulty lay beyond his control or even envisagement. It lay of course in the fact that he must sell the bulk of his crops at prices governed by world conditions, but that in regard to the latter, in the then state of statistical organization, there was little or no information of a kind that could reach or benefit the individual producer. Large private or organized interests, chiefly of middlemen, might, it is true, by the expenditure of considerable sums, inform themselves with a degree of promptness on these wider issues. The press also, and especially the agricultural press, gave out with fullness and despatch what information came to hand even from distant sources. The difficulty, however, as just stated, lay with the character of the information itself, wholly lacking as it was in many important details, and sporadic and inadequate in others. In certain countries, for example, it derived mainly from private sources and was often unreliable, either deliberately so or because of insufficient care in the preparation. In others, where government statistics had been undertaken, they still rested too often on narrow and unstable foundations or were assembled by methods that could not guarantee accurate results. Even where trustworthy government reporting systems had been developed (and in some countries these dated back well into the nineteenth century), the statistics came forward on different dates and at different intervals, often representing different methods of collection and compilation, and usually couched in different and confusing terminologies.

Under such circumstances interpretation was difficult if not impossible

for the ordinary producer and trader; whilst a picture of the whole, comprehensively conceived and with balance between the parts, was out of the question—especially in the absence of any official agency for bringing together and assessing what data there were. "Chaotic" is a not too highly colored term to apply to agricultural statistics, viewed from an international standpoint, in the closing years of the nineteenth century. The result was frequently to throw the marketing process into the hands of speculators far beyond the point at which "hedging" and similar dealings in "futures" perform a legitimate function. (The "cornering" of markets is possible only where ignorance of conditions is widespread.) Embarrassing as such a state of affairs may be for governments, it bears still more heavily in the ultimate resort upon the individual farmer. In these uncertain seas David Lubin found himself frequently, as he vehemently averred, without compass to steer by or rudder to steer with.

How Lubin succeeded, after years of effort, in bringing home these facts to the governments of the day need not be repeated here. It was a strenuous and long-drawn battle. To the governments of 1900, almost without exception, Lubin's proposals appeared premature if not impracticable, and himself, when he continued to press them, as visionary to the point of fanaticism. Later, however, he did not stand alone; several eminent economists and leaders of opinion became his converts. Nor, as we have seen, was he the first to suggest the specific way out. His place in the movement depends upon the doggedness with which for more than a decade, in season and out, he pursued his idea and refused to let it be laid aside. He was the gadfly that eventually brought action. At long last, in 1905, a conference of 113 delegates from 41 nations met at the call of the King of Italy to draw up a working plan based on Lubin's propaganda. Three years later the International Institute of Agriculture opened its doors.

With the constitution and general procedures of the Institute—not without serious weaknesses in the one and mistakes of policy in the other—we are not here concerned. Designed primarily as an organization for the betterment of agriculture *per se*, its constitution was the first to embody the principle of super-national control and to confer independent powers of initiative, thereby giving a lead to the considerably later ILO and League of Nations. From 1908 on, the Institute held the field as centre of international thought and cooperation in agriculture, growing from a membership of 47 countries at birth to over 70 later, but falling off to 38 after the outbreak of World War II. To it, but with power and duties enlarged and extended in many directions, the Food and Agriculture Organization of the United Nations has now succeeded. We need refer here, therefore, to only one feature in the work of the Institute —the feature, however, from which as bedrock, according to the original design, much of the rest was to proceed—namely, the organization of a scheme of sound and comprehensive international agricultural statistics.

STATISTICAL ACTIVITIES OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

Statistics of world-wide scope and availability for agriculture had been the primary motive and aim of the Institute's founders. The statistical function "properly performed," Lubin had declared, was alone "quite sufficient" to justify the establishment of the Institute ("figures valuable enough to tempt the thief to steal them and the rogue to buy them," he described as

the anticipated result). On its foundation, therefore, the first task to be undertaken was the setting up of a crop reporting service for which a series of rules and principles were formulated in 1912-13. These proved of signal service in ensuing years in directing parallel attack upon the problem. In time also an enlarged and progressively authoritative volume of statistics emerged; the number of crops reported on by the Institute increased gradually from 7 to 34. A bulletin for the publication of these data and an annual Year Book of Agriculture were in due course launched.

The outbreak of World War I occurred when little more than a beginning had been made upon these undertakings, but the war caused only a suspension and not a cessation of the Institute's activities. It was not, however, until 1926 that means could be found for properly defining the second and more pervasive statistical project—that of a World Census of Agriculture—though it had been recommended by the General Assembly, the supreme governing body of the Institute, as early as 1913. In the year mentioned, a grant of $50,000 by the Rockefeller Educational Foundation enabled the plans for such a census to be drawn up in the necessary breadth and detail for submission to the adhering nations, over 70 of which were directly consulted. A little later also, periodical statistics of forestry and horticulture were tentatively inaugurated. Unfortunately, the census was only partially tried out in 1930, though some 38 countries applied it in varying degrees. Again in 1940 the war prevented any general promulgation or adoption of the plan. In point of fact, the statistical work of the Institute had been crippled by budget and staff curtailments throughout most of the period between the wars, various other projects being given precedence, notwithstanding the undeviating support of the General Assembly. Administrative difficulties in various other directions also supervened. As previously noted, the Institute came formally to an end in 1945 when its work and equipment were taken over by FAO.

STATISTICAL ORGANIZATION UNDER FAO

This much of retrospect has been thought essential in order to define the stage at which the international organization of agricultural statistics had arrived prior to World War II, as well as to show the extent to which present policies rest upon and may expect to profit by the experiences of the past. Without attempt to outline the organization and functions of FAO in their broader aspects, it may be repeated that it has new and exceptional machinery as well as generally larger facilities at its disposal than had the previous effort, together perhaps with a more compelling spur to action in the disturbed and distressful conditions of the present postwar world. Its "regional" offices of continental scope, its advisory committees for consultation purposes in some 35 countries, may be particularly mentioned. Confining ourselves to the statistical phases, the successive steps taken in the way of basic arrangements have been as follows:

In recognition of the importance attaching to statistics, one of the five original technical committees to be appointed (after the Hot Springs Conference of 1943) to draw up the documents and recommendations on which the work of FAO should proceed was a committee on statistics. Later, as in the case of the International Institute of Agriculture, when the Constitution came up for adoption at the Quebec Conference, "the collection, analysis, interpretation and dissemination of information relating to nutrition, food,

and agriculture" was named in its opening article as a primary function of FAO, statistics being the obvious backbone of "information" in the economic and social field. For the implementation of this instruction in turn, one of the earliest steps in the organization of FAO was the creation of a strong central statistical unit for the purpose of establishing and maintaining that constant watch in terms of numerical measurement upon agricultural conditions throughout the world which is the first step of all in an intelligent attack upon current problems. (Included in such an undertaking of course is the task of improving and equalizing the quality of national statistics up to at least minimum standards—an essential to the filling of the serious gaps and the correcting of the considerable differences in method which still persist.) The unit in question was to keep in touch with and to serve statistically the various other activities of FAO, at the same time being represented on and co-ordinating its operations with the general Statistical Commission of UN. Overlapping and duplicating of statistical work, whether within FAO or in the larger orbit of UN, was thus provided against.

The more immediate and pressing obligations of the Statistical Unit to date have lain within the field broadly designated as "crop reporting," or the statistics of current production and distribution. (As to why this should be so, the Unit's estimate of the postwar world food situation prepared for the Geneva Conference offers eloquent testimony, namely, that whereas the need of the deficit countries stood at 38 million metric tons of food grains in August 1947, the supplies available in the export countries totaled not more than 29 million metric tons—an example of the clarity and force of statistical statement.) In this field it may be said that the Statistical Unit has not only picked up most if not all of the services previously maintained by the International Institute of Agriculture (the "Centre International de Silyaculture," and the "Comité International du Bois"), but has improved upon some, and has further improvements in immediate train. A quarterly *Economic Review of Food and Agriculture* has been begun, and a monthly statistical bulletin planned. *Unasylva*, also quarterly, performs a like service for forestry. A series of intensive studies relating to important individual products of agriculture and forestry have been made and published. A *World Fiber Survey* has been issued. The *World Year Book of Agriculture*, which had ceased with 1941, has been brought up to date as of 1946 in three volumes (dealing with production, trade, and country-by-country comparisons, respectively, over the intervening years) and will be continued in two volumes annually. The *Forestry Year Book* is being resuscitated. Though the statistics of consumption are comparatively undeveloped, a *World Food Survey* has, as above noted, been completed, and will be continued as an annual publication. In brief, the maintenance of an orderly and comprehensive outlook upon the large and ramifying congeries of phenomena which constitute world agriculture today, have been replanned and taken in hand with a thoroughness and prospect of usefulness which may be described as new.

THE WORLD CENSUS PROJECT

It is, however, with the second but by no means subsidiary—indeed in some respects foundational—aspect of international agricultural statistics, namely, the projected World Census, that the present paper is concerned, and to which the remainder will be devoted. In the treatment which follows a

brief account will first be given of the discussions of the project that have taken place to date, the plans that have been drawn up, and the arrangements that have been already completed. This is succeeded by a series of notes, first, on the machinery and methods by which it is proposed the census should be taken, and secondly, on the scope of the census, with special reference again to the types of information it is designed to bring out; while finally a recapitulation will be made of the purposes it has in view and the specific ends it will subserve under present exigencies.

THE PLANNING OF THE CENSUS

The 1950 census project had its beginning and received its first formal endorsement in the first and second general conferences of FAO, held in 1945 and 1946, respectively. The conference of 1945 had before it the plans which had been laid down under the Rockefeller grant of 1926-27, together with the results of their partial adoption in 1930. A resolution was accordingly passed instructing the director general to have a study made as to the needs for a similar census in 1950 or adjacent years and of the general problem which this would entail. The study which followed resulted in a strong recommendation in favor of the project. At the ensuing conference of 1946, the census was thereupon given a foremost place among items of current FAO policy. The drawing up of a specific minimum program was finally proceeded with, its extension to every country, including colonies and others without self-government, being assumed. Procedures in connection with this program to date may be summarized as follows:

First, a minimum list of the items to be covered in the census was drawn up, together with an extended definition of each item. The list was limited in the first instance (as laying down a program within reach of the smaller countries) to so-called "international" crops, i.e., crops that are of more than local importance and that enter into international commerce on a considerable scale. It is expected that each country will alter or expand this to suit its individual requirements.

Secondly, as assisting such expansion and indicating lines it might follow a more complete list involving breakdowns as well as additions was prepared. This had in mind the requirements of the larger and more experienced countries.

Third, a series of proposals were put forward as to the tabulations into which the data should be assembled for final issue. An important one of these relates to the classification of livestock for statistical purposes.

The above suggestions when tentatively completed were sent forward to the member and other nations, likewise to various research foundations, agricultural experts and others, with a request for comments and criticisms. The Specialized Agencies as well as other international organizations were similarly consulted with regard to sections in which they might be particularly interested, as for example ILO on the subject of farm labor and the Statistical Commission of UN on the scope and co-ordination of the items as a whole.

Finally the lists and definitions as thus clarified were taken up and considered item by item in three international assemblies of agriculturists and statisticians: First, by a special conference of European agricultural statisticians called by FAO at Rome in March 1947, at which 18 countries were

represented; secondly, at a special session of delegates from the countries of the Western Hemisphere held under the auspices of the Inter American Statistical Institute in September 1947, at which such points as the legislation involved, the preparatory steps to be taken, the education of the public, methods of enumeration and compilation, etc., were examined in detail; and third, at a meeting called by FAO in London in December 1947, at which the special difficulties to be encountered in underdeveloped countries were considered by representatives from the Colonial Offices of seven of the member nations. Much valuable advice was thereby obtained, and it is the intention to submit the program to further conferences representative of the nations of the Middle and Far East, respectively.

It will be seen that the census will rest on widely and thoroughly canvassed opinion, and will embody all the lessons that have been learned in the hard school of experience. Some thirty countries have already announced that they will adopt the project whilst as many more have ways and means under consideration.

HOW THE CENSUS MAY BE TAKEN

On the question of the administrative and other machinery by which a census of agriculture can be taken to best advantage, details of course must remain for each government to determine for itself. The data to be gathered will differ from country to country and even regionally within some countries, according to the nature and needs of local agriculture. Not less will the administrative agencies available for census taking, and the sources from which the information may be obtained, differ. Much will depend also upon existing statistical organization within each country, both for agricultural statistics and for statistics as a whole.

Speaking for the majority of countries, there would appear to be two main alternative procedures—it being understood that the census is conceived as in principle a direct enumeration of individual holdings and operations. In several countries, notably those in which the population is scattered and in which agriculture is a predominating occupation over considerable areas, it is customary to combine a census of agriculture with the periodical census of population, the latter being usually enjoined by law at 10 or 5-year intervals. This obviously affords an opportunity for obtaining an increased return from the large organization and overhead which a population census entails, without prejudice to either branch of the inquiry. In many other countries where crop reporting systems have been highly developed, it is no less customary and feasible to secure the additional "census" data by additions to the schedules on which current conditions are recorded, care being taken, by distributing the additional items over an appropriate period of time, to avoid overburdening the schedules. Especially is this method available in countries which exercise a considerable degree of control over agriculture, and in which the administration of such controls automatically yields statistical by-products, as for example where the control of dairying or bacon outputs involves the enumeration of milch cattle or swine, the number and size of processing plants, etc., or where the importation and distribution of foodstuffs under controls may provide information of still broader type. In other countries again, wholly independent and *ad hoc* organizations have been set up for an agricultural census. Finally, in still others, "sampling"

may be resorted to for certain items, provided the necessary technical safeguards can be applied. Incidentally, it is hoped that the agricultural activities of tribal and other groups outside normal marketing systems will in future censuses be estimated.

As intimated, these and other questions of procedure, such as the extent to which the data may be collected by correspondence instead of by personal visitation, are matters of administrative policy, on which within bounds the individual governments remain the best judges. What FAO specially hopes to accomplish, in urging the widest possible adoption of the census project, is general agreement upon minimum statistical standards; however widely nations may differ *inter se* in the nature of their agriculture and in their facilities for a census, it is still possible for all to work to a common basic plan. A free interchange of ideas to this end, even though no set pattern for one and all emerge, is the immediate purpose. Thus no single census questionnaire has been drawn up, FAO preferring to confine its suggestions to points of principle and to outlining the groups and types of information which are particularly called for. Two addenda to to these remarks on methods, however, may be in order:

First, it is considered advisable not to associate statistical work (unless under circumstances of an exceptional nature) with offices and officials primarily responsible for assessment and taxation systems, especially with officials engaged in the actual collection of taxes. This is for the avoidance of suspicion in the minds of the people that individual returns may be employed to their financial detriment or for any other than purely statistical purposes, that is, their use only in the form of totals or other mass figures. Needless to add, employees in statistical work should be imbued at all times and under all circumstances with appreciation of the supreme need of thoroughness and accuracy in their work.

Secondly, it is scarcely less necessary to emphasize that census-taking, both in the field work and in the compilation, analysis, tabulation, and interpretation of the materials, is a technical and scientific process, requiring skills and experience of a special order. From its foundation, FAO has aimed to be in a position to tender advice and help to countries in the statistical as in other fields. Thus it hopes eventually to be able to arrange exchanges of experienced statisticians that will assist the less well-equipped countries in planning and undertaking statistical work. More particularly, and in view of the prevailing scarcity of trained statisticians, steps are at the present time being taken to establish training centres at a series of strategic points to which adjacent countries may send employees in key positions, who would profit by instruction in the general principles involved and by being brought into touch with larger and well-established statistical systems. The training would combine observation of actual statistical processes—the organization of staffs and staff operations, the use of machinery, the application of sampling whether as a check or in the obtaining of data, etc.—with a course in elementary statistical theory. It is unnecessary to enlarge upon this program, announcements concerning which will be made in due course, except to add that it was in special reference to needs that might arise in connection with the projected census, no less than in the complex processes involved in accurate crop estimation, that it was originally conceived. In no other statistical undertaking do the qualifications of the personnel engaged and its ability to draw upon expert knowledge and experience bulk of larger importance.

WHAT THE CENSUS WILL COVER

The pivotal items of a census of agriculture have been roughly indicated in the preceding, but may now be stated more precisely, impossible as it is to elaborate beyond a point. The exact scope of the census in each country will of course depend to a large extend upon the statistical work already in progress and the statistics already available. Assuming a crop reporting system, the census will ordinarily limit itself to those basic "capital" features which are under comparatively less frequent change. Its purpose in such cases is to supplement, round out into a coherent whole, and thereby give full meaning to, the current measurements. In cases where the latter are limited, the coverage should of course be more inclusive. By broad categories the following groups of questions suggest themselves (no definitions of terms are attached though these have been worked out by FAO in adaptable detail):

1. Agricultural lands and their utilization, classified as (a) crop lands (areas under important grains, fruits, vegetables, etc.), and (b) pasturage and forest lands. The number and size of individual holdings down to as small amounts as possible should be obtained, also the status of the cultivator (whether owner, tenant, sharecropper, etc.). Where primitive conditions prevail, estimates of total areas, etc., should be obtained by methods as reliable as possible.
2. The number of farm livestock (including poultry) classified by kinds and purposes; dairying.
3. Other material equipment of agriculture, including farm buildings and permanent improvements; farm implements and machinery by classes; mechanical power employed.
4. The current year's total harvested production by important categories as related to the foregoing, also stocks of products on hand on the census date. The census year recommended is the calendar year 1949 in the Northern Hemisphere, and the year ended June 30, 1950, in the Southern Hemisphere, though these periods may need adjustment to local circumstances.
5. General economic features, such as farm incomes; costs of operation and inputs, including expenditures on seed, fertilizer, pesticides, wages, taxes, interest on loans, etc.; farm mortgages and other loans and credits; crop failures in the census year.
6. The farm population and its elements: (a) The family of the cultivator, its members classified by sex, relationship, and other characteristics; (b) non-family labor employed, number and characteristics, wages paid, etc. Recent movements of population to and from the land should be measured.
7. The social condition of agriculture: Family consumption of products of the farm; other nutritional aspects; housing.

It will be appreciated that the above is of the nature of a series of "catch-alls" for a breakdown of items according to local needs. Taken together it is thought that they represent a minimum for a satisfactory picture of agriculture from a national standpoint no less than for purposes of international summations and comparisons.

It should be added that whilst the above questions pertain primarily to agriculture, the relation of forestry and fishing operations where these are associated with agriculture will be provided for on the schedules. A separate inquiry is under way by FAO looking to a complete inventory of world forest and timber resources (areas and classes of forest, growing stocks, growth and annual drain, etc.) the plan of which before launching was submitted to two meetings of experts; on this a "forest industry survey" will be superimposed in 1950. Similarly a scheme of fisheries statistics is being organized, to cover current catches as well as periodical returns of the vessels, boats, trawlers, wharfs, warehouses, gear, processing plants, etc., employed.

WHY A WORLD CENSUS OF AGRICULTURE IN 1950

We come finally to the all important question of the purpose, or rather purposes, for which so large a project should now be undertaken, not in the more important producing countries alone but in each and every country and up to at least a minimum standard throughout the world. The answer to this will have been already gathered in more than a general way. It was indeed with this object that an opening sketch was given of those earlier years when few or no international statistics of agriculture existed, and of the reaction to this lack by the enlightened opinion of the day. For the same reason—the definition of purposes by implication—the characteristic features of the census have been set out. On the face of it, the details mentioned in the immediately preceding section alone need but to be enumerated to carry conviction as to their importance. The world's food, clothing and shelter supply must surely rank as a foremost, if not at bottom *the* foremost, interest and problem of mankind at the present time. Simply stated, it is for the exact statement of that problem and thereby ensuring an enlightened approach to it, that the census project is advanced. But it is essential here and now to be categorical on this point. Summarily, the reasons for the census may be grouped under three headings which though interlocking at many points may without undue straining be differentiated as statistical, economic, and political, respectively. On each of these a word in turn:

1. The statistical purposes of the census, involving the place it occupies in the general scheme, have been stated above but may be enlarged upon in relation to the work of FAO in hand. It is superfluous to point out that the changes in agriculture during the past decade and a half have been of the profoundest character. To the great depression has been added the cataclysmic upheaval of the war, both reaching down in their effects to the very foundations of our social and economic life and organization. Of World War II it is commonplace to say that never in history has a war so changed the face of nature and of human relations. Even in countries distant from the scene of actual conflict and untouched by its immediate ravages, changes of fundamental import have resulted. It is true that during the past quarter century agricultural censuses have been taken in several countries. These, however, were only partially in accord with a common standard. Without exception they antedate the war. Equally it may be said that although crop reporting was maintained with efficiency in certain countries, in several there has been some drift away from the mooring posts which add significance to such figures. Unfortunately in still other countries there has been neither census nor crop reporting for many years. For the checking of much current information, for its extension over areas and in numerous particulars that need enlargement, nothing less than a world census of agriculture, uniformly and simultaneously carried out, will place statistics on a satisfactory footing. Sampling, for example, which is almost daily coming into increasing use, demands broad and authoritative foundations for its techniques. If there are to be reliable and adequate statistics for the services that will be required of them in the crucial era before us, it is essential that the foundations be well and truly laid in the immediate future.

2. The second category, above labeled "economic," brings us at once to the use of the statistics in a direct way—for practical economic ends—and to an enumeration of the classes which so use them. This applies of course to the general body of agricultural statistics; but of the latter, as we have seen,

the census may be called the vertebrae. Although it is the more highly organized and commercialized countries that use statistics most intensively, few countries indeed are today so self-contained as to consume all their products of the land on the farm itself or locally. To the question, therefore, "Who uses agricultural statistics and for what purposes?" the answer becomes a matter of classifying a wide and interlocking series of interests, reaching down in the final count to nearly everyone in the modern community. Moreover, what is a predominant use in one country may be secondary in another, making it difficult to speak in general terms. Obvious users of agricultural statistics, however, are the following groups:

(a) *Farmers and farmers' organizations.* It is with the quality of life of this group that FAO is especially concerned. (That perhaps two-thirds of the people of the world are engaged in agriculture adds weight to this remark.) The structure of agricultural statistics throughout is, in fact, keyed primarily to the agriculturist—in brief, to the practical problems of farm management and life upon the land. What kind of products to produce and in what amounts? Is ownership or tenancy, large-scale or small-scale farming, on the increase, and what are the factors involved? What is a good balance to maintain between field, fruit, livestock, poultry, dairying or other types of husbandry? How well balanced is the individual investment in land, buildings, and equipment? Are markets for farm products changing in the amount or in the nature of consumer demand? To what extent are farm products consumed on the farm? What are the causes and prevalence of crop failures? What is the situation with regard to manpower, the movement of farm population, the current and seasonal labor supply, and the wages of farm labor? These and other questions equally foundational can be reduced to perspective as a prelude to adjustment and action only by projecting them against a general statistical background. (The more the statistics are extended or broken down, the more of course can they be applied to problems of detail.)

In general, the economic status of the agriculturist can perhaps best be summed up through the medium of farm income statistics. The latter, however, gather final meaning only from the statistics that relate to social conditions on the farm—the size and characteristics of the farm family, the farm home and its equipment, the use of motor trucks and transport, the use of electricity for power and lighting, etc. The large co-operative associations and other farm organizations make constant use and distribution of these statistics in defining and securing for agriculture its "place in the sun."

(b) *Marketing agencies.* The large interests that revolve around the movement of farm products to ultimate markets must follow closely not only the volumes coming forward, but the inventories on farms and the forecasts and progress of production. Such are the Grain, Cotton, Fruit and other Exchanges; Boards of Trade with their numerous branches; livestock, fruit, and other terminal agencies; cold storage and other warehousemen, private, corporate or co-operative, etc. The speculative element in this field is curbed and made constructive by accurate and widely disseminated statistics.

(c) *Transportation.* Transportation agencies by highway, rail, and water make a direct use of agricultural statistics. Farm products are for the most part bulky, and long distances often separate producing areas from final markets for the great staples. There are seasonal as well as long-time variations in this flow, the handling of which must be planned in advance.

(d) *Manufacturers based on farm products.* Only a step removed from the preceding are the heavy purchasers of farm products as raw materials for

manufacturing, including flour mills, the meat-packing industry, breweries and distilleries, and the manufacturers of the many types of processed foods. Cotton and woolen mills are further examples.

(e) *General manufacturers, wholesale and retail trade.* In addition to the last mentioned group is the far-flung list of manufacturers, brokers, wholesale and retail traders, who look to the farm as a market for their finished products. On the purchasing power of agriculture depends in no small degree the business activity of this group. It includes of course not only the manufacturers and dealers in materials which are consumed in farming operations—such as machinery and equipment (wherein the distinction between new and replacement demands is important), fertilizers, insecticides, prepared feeds, containers, etc.—but also the manufacturers of consumer goods generally throughout the range of household, family, and personal requirements. Advertising campaigns, the reckoning of sales potentials, the mapping of sales areas, more particularly in rural sections, are dependent on agricultural statistics for both itemized and general information. The high news value attached to agricultural statistics by trade associations and trade journals in the numerous and varied divisions of manufacturing and merchandising attest to this.

(f) *Banking.* The commercial banks whose short-term loans play a large part in moving the crops as well as in farm operations anticipating such movement—also the numerous financial agencies, ranging from private bankers to large corporations which lend on mortgage—must have reliable and up-to-date statistics of outputs and farm values for determining specific policy. It should be added that the current state of agriculture enters largely into the calculations on which central banking systems regulate the volume and flow of general credit. The economy as a whole in many countries over large portions of the globe takes its "tone" from agricultural statistics. Not the least important use of such statistics, therefore. is by economic investigators and research workers, many of them working with unpublished as well as published data. Preeminently useful from this standpoint are census figures.

(g) *The general public.* The consuming public in general is in fact interested in agricultural statistics. If two-thirds of the human family is concerned from the production standpoint, each and every member of that family is interested from the standpoint of consumption—food, clothing and shelter needs being universal. Doubtless the city dweller looks chiefly to local markets. But the latter depend upon the situation as a whole—even the most perishable products now come from far afield. The prices and costs which enter into the family budget (with its primary emphasis on food) have their beginnings on the farm. This and the dependence of the economy on agriculture previously mentioned accounts for the heavy headlines under which important agricultural statistics invariably appear in the daily press.

(h) *Governments.* The above rapid enumeration leaves to the last the most important user of all—the government itself. It is the use by government that crowns the arguments for an agricultural census. Legislation and administration in a field so basic to general welfare, and of so many highly differentiated aspects, cannot proceed satisfactorily except on factual bases, particularly those of the type provided by statistics. Government policies for agriculture take on many forms. Often they are of regional application, such as rural electrification schemes, the engineering of irrigation enterprises, and other forms of local improvement or rehabilitation. Of wider incidence

are measures for the extension of farm credits, as well as those that centre on the support of farm prices, the imposition of price ceilings, food rationing and control, parity prices, etc. Policies for the stimulation of farm production and its direction into specific channels, and policies for the regulation of marketing in accordance with home and foreign demands, draw upon a still wider range of data both national and international. In the countries that have been active in schemes for agricultural betterment, a census or its equivalent has been consistently regarded as an antecedent and recurring necessity.

3. On the final of our three main counts, namely, those larger political and social issues which a World Census of Agriculture would do so much to clarify, FAO has already spoken on many occasions and in several connections. By "political" is not here meant the merely internal point of view and the light which the census throws in every country on regional and class differences, the dispersion of resources, etc.—a point upon which even greater stress might have been laid above, for few countries are homogeneous throughout. It is with the world situation, as to which no country can plead indifference, that we are here concerned. If the war was demoniac in its fury and destructive beyond precedent while it lasted, on no smaller scale is the problem of reconstruction and reorientation which it has left behind. In the latter the food situation stands in the forefront not only for its immediate acuteness but as a permanent problem, for it is platitudinous to say that the human army marches upon its stomach and that in food shortages lies a taproot to social violence and political revolution, everywhere. On this transcending issue it is interesting to note that the science of nutrition, founded less than a quarter century ago, and now the close concern of a special branch of FAO, gives us a new and more enlightened means of appraisal and approach. It has been estimated that at the present moment, largely though not wholly because of the war, nearly two-thirds of the human family is undernourished and suffering to a greater or less extent from diseases that may be traced to malnutrition. The further statement is made that a doubling in food production will be required in the next quarter century if these conditions are to be alleviated and a diet established that is a minimum for general health. A shortage more or less pronounced for the next two years is considered unavoidable.

Appreciation of the extreme gravity of the situation is attested by the suggestion of a World Food Board and the actual creation of an FAO Council to take it under constant advisement. Technical advance, in which the world is a unity to a degree in which its political and economic unity lag far behind, can no doubt do much to help. But such necessary measures as production and distribution programs in a general way, the tackling of transportation and exchange difficulties, the meeting of fertilizer shortages, etc., will be hampered, on a national as well as on an international scale, if there is no general *aperçu* of agriculture on which to base concrete proposals. That statistics assisted to an extent beyond previous experience at innumerable points in the war effort—particularly in the measurement and marshalling of the national resources that finally determined the issue—is well known. There is scarcely less reason today why they should not be similarly harnessed to the winning of the peace.

CONCLUSION

In conclusion it remains only to say that it is no duty or wish of FAO, in this as in other matters, to urge unduly a particular policy upon member nations. The decision as to the census rests with each government in turn, as—where the project is adopted—does the final determination of the items to be included and of the methods of collection to be employed. This is not only politic; it is the only procedure that promises practical results, for it is only by an agency native to the soil that a survey which takes on so many different and alternative forms can be finally planned and executed. FAO's function in the matter, to repeat, is fundamentally that of a clearinghouse—in the first place, for the formulation and dissemination of ideas and experiences on the subject, so that standards may be established and uniform methods laid down at a saving of time and costs to the member nations; secondly, it is hoped, for the analysis and publication of the results in due course to be reaped from a comprehensive and internationally comparable survey of agriculture. Co-operation to the latter end, it should be pointed out, is no exercise in altruism. It would be illusory to think that countries which may not take the census can profit to more than a limited extent by the censuses of others. A large part of the benefits of a national census conjoined with one that is world-embracing derives from the comparisons it affords and the envisagement it makes possible of the national situation in the setting of a homogeneous whole. Preeminently in its agriculture no country now "liveth to itself."

Should there be any point concerning the project, either of principle or detail, on which further information is desired by a member nation, the Food and Agriculture Organization holds itself ready to be consulted and to render any assistance in its power. Meanwhile, and not without knowledge of the other and serious demands being made upon governments at the present time, the Organization unreservedly commends to all the United Nations the adoption forthwith of the project for a World Census of Agriculture in 1950.

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ANOTACIONES Y EXPERIENCIAS SOBRE LA STANDARDIZACION INTER-AMERICANA DE LAS ESTADISTICAS DEL COMERCIO INTERNACIONAL*

POR CARLOS PROCACCIA†

SUMMARY

The necessity of obtaining comparable international trade statistics by means of the annual compilation and publication of data on imports and exports, classified in a uniform manner, is evident and universally felt. In the decade between 1935 and 1946, an attempt was made to attain this end through the subsidiary reclassification, according to an international scheme (the Minimum List of the League of Nations published in 1935), of national statistics based principally on a tariff classification. A new stage has been opened with the preparation and publication by the IASI of the *Convertibility Index for Foreign Trade Statistical Classifications of the American Nations* (October 1945), and continues with the work in progress to construct the Index definitively in Spanish, and to assure its effective application in all the American countries.

The work necessary to achieve this end, which culminates in its preparatory phase in the "National Convertibility Index" of each country, is within the scope even of statistical organizations which are not highly developed, provided an intelligent effort and constant activity are employed in the endeavor.

In Ecuador, during 1945, the Customs statistics relating to the foreign trade of 1943-44 were recompiled according to the Minimum List. In the present study, some of the basic tables from the Annual thus constructed are schematically reproduced. Utilizing the material acquired as a result of this compilation, the "National Convertibility Index" was formulated in 1947 in accordance with the Convertibility Index of the IASI.

I. STANDARDIZACIÓN INTERNACIONAL Y PERFECCIONAMIENTO NACIONAL DE LAS ESTADISTICAS DEL COMERCIO EXTERIOR

La elaboración de un esquema básico de clasificación uniforme para las estadísticas del comercio exterior del Hemisferio Occidental, constituye sin lugar a duda una de las actividades más importantes y prometedoras entre las que han sido planteadas y puestas en marcha por el IASI en el primer lustro de su existencia.

La característica más sobresaliente de los trabajos en referencia se encuentra, a nuestro juicio, en la circunstancia de que la elaboración del standard constituye sólo el primer paso de un conjunto orgánico de labores coordinadas. Objetivo final de estas labores son la estructuración y el perfeccionamiento de los instrumentos técnicos necesarios y apropiados para facilitar y asegurar la

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* Publicado por el IASI como material básico para la mesa redonda de la reunión sobre Problemas de Clasificación de las Estadísticas del Comercio Exterior, reunión celebrada el 13 de septiembre de 1947, durante la Primera Sesión del Instituto Interamericano de Estadística.

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efectiva aplicación del standard a las estadísticas de todos y cada uno de los países americanos.

La necesidad de procurar la comparabilidad de las estadísticas del comercio exterior de las varias naciones y especialmente de las repúblicas americanas, mediante la elaboración y publicación anual de estadísticas de exportaciones e importaciones clasificadas de un modo uniforme, es evidente y universalmente sentida. La uniformidad y comparabilidad internacionales son requisito esencial de una estadística del comercio exterior exacta, controlada y significativa, y lo es también desde el punto de vista nacional de cada país.

Es verdad que existen dificultades tal vez insuperables en el estado presente de la coordinación estadística internacional, para formular como programa de ejecución próxima, y más aún para conseguir, un eficiente control cuantitativo recíproco de las estadísticas de comercio exterior de los varios países. La aplicación de un sistema internacional uniforme de tan amplio alcance, debería traer como efecto la coincidencia de las cifras globales y clasificadas por mercaderías de la exportación del país de origen, en un período de tiempo determinado, con las cifras respectivas de la importación del país del destino en el mismo período. Este ideal de perfeccionamiento es posiblemente lo que se llama en matemáticas un "límite."

Sin embargo sí es posible y preciso conseguir, en un tiempo relativamente corto, y con trabajos que están al alcance de las posibilidades estadísticas de cada una de las naciones americanas, la aplicación efectiva de un sistema básico de clasificación internacional, que permita comparar entre sí las estadísticas del comercio exterior de los varios países, mediante la comparación de rubros de contenido homogéneo, y de composición uniforme, conocida y controlable. Un sistema básico de clasificación de esta naturaleza debe estar de acuerdo con el grado de desarrollo actual de la técnica industrial, de la merciología, y de las prácticas comerciales internacionales, ser lo suficiente flexible para adaptarse a los posibles adelantos en un futuro relativamente cercano, y lo suficiente elástico para corresponder a las exigencias y a las posibilidades de países cuya estructura y desarrollo económicos son desiguales, y en muchos casos absolutamente distintos; debe, por fin, ser capaz de proporcionar cuadros elaborados sencillos y claros, de fácil y útil consulta para la gran masa de "consumidores" de las estadísticas del comercio.

La consecución de estas finalidades presenta evidente interés, no solo desde el punto de vista del uso internacional, sino también de la utilización de las estadísticas del comercio exterior en el mismo país que las elabora y al cual se refieren.

Con frecuencia se presentan como estadísticas del comercio exterior conjuntos de datos que reproducen pura y simplemente las estadísticas de Aduanas. Es, por el contrario evidente que, si bien las registraciones y documentaciones de Aduanas proporcionan los datos primitivos fundamentales para las estadísticas del comercio exterior, las estadísticas aduaneras no pueden servir en sí mismas como estadísticas del comercio exterior, debiendo ser, para este último fin, por lo menos reclasificadas y reelaboradas en forma apropiada.

Las clasificaciones aduaneras son necesariamente mucho más analíticas de lo que conviene a una buena estadística del comercio exterior. Además, la preocupación tributaria que naturalmente domina en la formación de los aranceles de Aduanas, y los defectos de tecnicismo y de sistematización que

afectan a algunos de ellos, son causa de dispersión en varias secciones y capítulos de mercaderías substancialmente afines, y de la reunión, algunas veces en el mismo párrafo, de mercaderías completamente heterogéneas.

Es verdad que la existencia del material de información numérica aduanera ha hecho más fácil, para muchos países de organización estadística incipiente, obtener y publicar estadísticas de importaciones y exportaciones. Esta misma circunstancia, sin embargo, ha sido un obstáculo para el efectivo perfeccionamiento de las estadísticas del comercio exterior, por cuanto ha formado de hecho una barrera a la adopción de sistemas de clasificación más modernos, técnicamente correctos, prácticamente útiles, y comparables en el ámbito internacional. La disponibilidad de estadísticas aduaneras ha suplido, aunque de un modo impropio, a la falta de verdaderas estadísticas del comercio exterior; y mientras más extensas se hacían las series históricas, más inconveniente se ha considerado interrumpirlas, con la adopción de nuevos sistemas, y más difícil convertirlas.

Era y es, sin embargo, preciso, romper el círculo vicioso, que transforma en elemento de dependencia, y por eso de atraso, de las estadísticas del comercio exterior, su vinculación con las registraciones aduaneras, que por el contrario puede constituir, si es bien utilizada, un elemento de primer orden para su adelanto.

Las oficinas de Aduanas son naturalmente llamadas a seguir recolectando los datos primitivos para las estadísticas del comercio exterior, por cuanto el momento consumativo de cada acto de comercio exterior, importación o exportación, se identifica con el paso de las mercaderías importadas o exportadas a través de las Aduanas.

La calificación, por parte de las Aduanas, de las mercaderías, especialmente de las importadas, como comprendidas en uno u otro párrafo del arancel, da lugar a una clasificación aduanera, necesariamente distinta de la que es preciso aplicar para las estadísticas del comercio exterior.

Sin embargo, utilizando la codificación aduanera como elemento de referencia para la codificación estadística comercial, mediante un oportuno sistema de enlace entre las dos codificaciones y clasificaciones, es posible obtener, con el mínimo esfuerzo y el mayor resultado, estadísticas del comercio exterior que llenen las exigencias fundamentales para su utilización tanto nacional como internacional.

Esta finalidad se consigue en un grado más imperfecto reclasificando las estadísticas de origen aduanero, ya elaboradas, y transformándolas en otras elaboraciones estadísticas, generalmente de carácter suplementario, clasificadas de un modo uniforme sobre la base de un esquema internacional apropiado. Un resultado mucho más completo, perfecto y eficiente, se consigue volviendo a codificar y clasificar los documentos aduaneros de cada acto de importación o exportación, según un esquema básico oportunamente relacionado con la clasificación aduanera. Que la doble codificación y clasificación se efectúe contemporáneamente en la misma oficina de estadística de Aduanas, o que la clasificación comercial según el esquema básico se ejecute en una oficina distinta y en un momento sucesivo, pero siempre sobre la base de fichas individuales, es problema conexo con la organización administrativa y estadística de cada país y no incide substancialmente sobre la corrección de las elaboraciones.

II. LABORES INTERNACIONALES E INTERAMERICANAS PARA LA OBTENCIÓN DE ESTADISTICAS DEL COMERCIO EXTERIOR UNIFORMES Y COMPARABLES

Una rápida reseña de los trabajos efectuados en el campo internacional e interamericano para procurar la uniformidad internacional y el inseparable perfeccionamiento nacional de las estadísticas del comercio exterior, nos permitirá llegar a la conclusión de que la primera etapa—clasificación subsidiaria—ha sido superada ya, con resultados prácticos de limitada importancia, pero dejando vitales raíces para los desarrollos futuros; y que estamos abriendo camino hacia la segunda etapa—la clasificación principal de las estadísticas del comercio exterior según un esquema básico internacional. Corresponde la primera etapa a la aplicación subsidiaria, por lo menos en América muy limitada, de la "Lista Mínima de Mercaderías para las Estadísticas del Comercio Internacional" del Comité de Expertos Estadísticos de la Sociedad de las Naciones. La segunda etapa se abre con la elaboración y publicación por parte del IASI del *Convertibility Index for Foreign Trade Statistical Classifications of the American Nations* (edición preliminar), y continúa con las complejas labores, ya en curso, y que deberán llevarse a cabo coordinadamente, como esfuerzo conjunto, para estructurar el Index en forma definitiva, con relación a todos los países del Hemisferio Occidental, y asegurar su efectiva aplicación en cada uno de ellos.

Elemento de enlace entre las dos etapas, es la misma "Minimum List," conservada fundamentalmente en el Basic Classification Scheme del IASI, y que podrá rendir, en esta última forma, toda la utilidad de que es capaz, por la bondad esencial de su estructura, mediante su aplicación integral, sistemática y generalizada por lo menos en un continente.

Los principios que han sido adoptados como base de la elaboración de la Minimum List son expuestos en el Informe del Comité de Expertos Estadísticos de la Sociedad de las Naciones sobre los trabajos de su tercera sesión (documento C.152, M.63, 1934, II A)[1] y en el anexo No. I B de la Minimum List (edición de 1938).[2]

En la formación de la Minimum List la composición de las secciones (17) y de los capítulos (50) ha sido determinada especialmente según la naturaleza de la materia prima, y en vía secundaria según el uso de las mercaderías.

Se elaboró ulteriormente, como elenco subsidiario, un sistema de clasificación según el grado de elaboración y el uso. Esta segunda parte de la Minimum List tiene sin lugar a duda importancia y utilidad muy superiores a la atención que hasta hoy se le ha prestado. En efecto, uno de los elementos de mayor interés para caracterizar la estructura económica de un país, su grado de evolución y el ritmo de su marcha del estado más simple y primitivo de la economía hacia el más complejo y diferenciado, es la composición cualitativa de su comercio exterior, bajo el aspecto del grado de elaboración y el uso de las mercaderías que lo componen, en la importación y en la exportación.

El mismo análisis cualitativo del intercambio comercial bajo el aspecto del grado de elaboración y el uso de las mercaderías, es mucho más significativo que las indiscriminadas cifras globales que en general se emplean para anotar el saldo activo o pasivo del intercambio comercial entre dos países.

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[1] Reproducido en: *Convertibility Index for Foreign Trade Statistical Classifications of the American Nations*, section on Basic Classification Scheme, preliminary edition, Inter American Statistical Institute. Washington, D. C., October 1945, p. 1097. (*Nota del editor.*)

[2] Idem, p. 1091. (*Nota del editor.*)

La aplicación de la Minimum List no fué en el pasado tan amplia, como habría sido necesario, a fin de que pudiese dar resultados proporcionales a la bondad del sistema. Mucho más en el Viejo Mundo, y muy escasamente en América, la Minimum List se ha aplicado para la elaboración de estadísticas subsidiarias desarticuladas de las básicas, y que han quedado por lo tanto como apéndices de escasa vitalidad.

La Minimum List no ha sido utilizada en el proceso fundamental de la elaboración, siendo en general los cuadros subsidiarios resúmenes derivados de la transposición, no siempre bien orientada ni prolija, de las estadísticas principales en otro molde.

Para los países latino-americanos se presentó además la dificultad derivante del hecho de que, hasta el año 1945, no existía ninguna versión al castellano de la Minimum List. Y adviértase que para traducir a otro idioma un esquema de clasificación estadística en general, y especialmente la Minimum List, el conocimiento de los dos idiomas es condición necesaria pero no suficiente. Es preciso también y sobre todo un conocimiento minucioso del sistema de la Lista y de sus posibles aplicaciones; por cuanto diferencias de matiz entre una y otra forma de traducir, en apariencia poco importantes desde el punto de vista idiomático, pueden dar lugar a errores de primera magnitud en el acto de la clasificación.

Si los escasos resultados de la limitada aplicación de la Minimum List no se debieron al esquema mismo, substancialmente bueno, sino a sistemas de aplicación inadecuados, fué atinado y oportuno que el Instituto Interamericano de Estadística, empeñado en establecer un Esquema Básico de Clasificación para las Estadísticas del Comercio Exterior del Hemisferio Occidental, adoptara como base esencial la Minimum List.

En la adaptación de la Minimum List como Basic Classification Scheme se introdujeron ajustes, en algunos casos para aclarar y hacer más propio el texto del item, en otros para tomar en cuenta los últimos adelantos tecnológicos o facilitar la agrupación en el nuevo esquema de la nomenclatura vigente del comercio exterior estadounidense. Pero en ningún caso los ajustes han alterado ni los principios ni la estructura ni el contenido del esquema, comprobándose así su flexibilidad, su aptitud virtual para adaptarse a los posibles cambios tecnológicos, merceológicos y comerciales del futuro.

Sobre el total de 456 item[3] de la Minimum List se introdujeron ajustes en 116. Los item reformados pueden agruparse, según el carácter de los ajustes, en la forma siguiente:[4]

(a) Rectificaciones de carácter puramente idiomático o cambios en la redacción sin efecto sobre el contenido (item: 1, 6, 107, 236, 327, 404, 406b);

(b) Inclusiones expresas (o exclusiones expresas) en el texto del item o en notas, de mercaderías o clases de mercaderías, que, según el sistema de la Minimum List, ya estaban implícitamente incluidas (o excluidas) en el item relativo (item 1, 57, 58, 63, 70, 81, 84, 115, 116, 124b, 125, 134, 151/152a, 183, 212, 214, 217, 219, 221, 225, 229, 248, 253, 261, 326, 337, 340 a 349, 356, 364 a 369, 376b, 381, 392, 407, 408, 418a, 432);

(c) Ampliación del contenido de un item, compatible con el sistema general de la Minimum List (item: 182, 281b, 358, 400c, 433, 436, 441, 451);

(d) Subdivisión de un item en sub-item, o de un sub-item en fracciones, o aumento de sub-item a un item ya fraccionado, sin ampliaciones en el contenido ni modificaciones en el sistema (item: 1, 25, 115, 117K, 120, 124d, 125, 151/152b, 275, 297d, 329, 331b, 338, 339, 372d, 373c, 376f, 376g, 377, 381a, 383, 384c, 385, 391, 392, 393, 396b, 399, 402, 406a, 444, 445);

[3] La palabra "item," por su origen latino, puede ser admitida, de la terminología estadística inglesa en la castellana. Lo que no es admisible en castellano es el plural "items," tratándose de palabra latina invariable, que, usada en español en forma substantivada, debe quedar invariable (el item; los item).

[4] Los item cuyo número se repite en más de un grupo han sido objeto de varios ajustes de distinto carácter.

(e) Subdivisión de un item en sub-item o de un sub-item en fracciones, con ampliaciones en el contenido o modificaciones no esenciales en el sistema (item 10, 12, 187d, 256, 276, 372f, 423, 434, 435, 450);

(f) Refusión de los sub-item, para volver a fraccionar el item en forma distinta (item 236, 401, 418, 422);

(g) Supresión de la división de un item en sub-item o de un sub-item en fracciones o reunión de dos o más sub-item (item: 156, 168, 187b, 217a, b, 219, 221, 225, 229, 232, 304, 307).

Por lo que se refiere a la reunión de dos o más item de la Minimum List para los efectos del Basic Classification Scheme (item: 139 y 140; 151 y 152; 159 y 161; 160, 162 y 165; 198 y 199; 207 y 208; 401 y 402; 424 y 426) no se trata en sentido propio de ajustes, tanto que los item no han sido fusionados y cada uno ha conservado su número y su texto. Trátase, como se anota expresamente en el Prefacio al Convertibility Index, de un expediente práctico, debido a la imposibilidad de asignar, en el caso concreto, determinados grupos, por motivos contingentes no fraccionables, de mercaderías del comercio de los Estados Unidos, a uno más que a otro de los item reunidos. Los países que no encuentran semejante dificultad es preferible mantengan los item separados. Sin embargo es posible que otros países tengan análogas dificultades en relación con otros item y puedan encontrarse en la necesidad de reunir dos o más de ellos.

Los ajustes introducidos en la Minimum List han dejado inalterado el número de los item, en 456, y han elevado de 125 a 144 el número de los item divididos en sub-item, con un total de 399 sub-item, y de 5 a 22 el número de los sub-item fraccionados, con un total de 69 fracciones. El número total neto de item, sub-item y fracciones es, por lo tanto, en el Basic Classification Scheme, 758,[5] y las categorías elementales de clasificación van de un mínimo de 456 (utilización de los item sin ninguna subdivisión) a un máximo de 758 (utilización de todos los sub-item y fracciones).

En la casi totalidad de los casos, las subdivisiones no han sido consecuencia de la imposibilidad de comprender una determinada mercadería en un item o sub-item ya existente, sino de la oportunidad de conseguir una clasificación más diversificada entre mercaderías abarcadas por un mismo item y sub-item.

Análogamente puede preverse que una mayor diversificación futura en las mercaderías, por efecto de los adelantos tecnológicos y del desarrollo comercial, podría dar lugar a fraccionamiento de item o de sub-item. La posibilidad de reunión de item (que debe ser usada sin embargo con suma discreción) y la facilidad que la Lista Minimum ha prestado de fraccionar item y sub-item, sin alteración del sistema, y asímismo de suprimir sub-item y fraccionamientos, para dejar establecido el Basic Classification Scheme, comprueba una característica sumamente importante de uno y otro esquema: La elasticidad. En 746 categorías de la Minimum List[6] han podido ser agrupadas sin dificultades insuperables alrededor de 3000 clases distintas, correspondientes a la nomenclatura numerada más analítica del comercio exterior norteamericano. Es fácil prever que el esquema básico prestará suficiente facilidad para agrupar en una clasificación adecuada las mercaderías que componen el comercio exterior de todos los demás países americanos.

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[5] (456 − 144) + (399 − 22) + 69 = 758.

[6] En la aplicación del Basic Classification Scheme a la nomenclatura norteamericana del Comercio Exterior las 758 categorías del esquema en su extensión máxima han sido reducidas a 746 por efecto del a reunión de algunos item, en la forma y por las razones indicadas.

De otro lado, quedando siempre facultativa la adopción de los sub-item y fracciones de sub-item cuyo contenido puede totalizarse en el item o sub-item no fraccionado, los pequeños países pueden adoptar y aplicar el esquema en la forma más analítica o en la más sintética, de acuerdo con la importancia cualitativa y cuantitativa de las varias mercaderías objeto de su comercio exterior, con su propio desarrollo estadístico, etc.

El Basic Classification Scheme es la base del *Convertibility Index for Foreign Trade Statistical Classifications of the American Nations*, que se publicó en edición preliminar en Wáshington en octubre de 1945. Se cumplió así con el primer punto del programa general sobre la materia, que se puntualiza en el Prefacio a la misma edición preliminar.[7]

El citado Prefacio luego aconseja medidas específicas para llevar a cabo la tarea, no siempre muy fácil ni sencilla, de estructurar el Indice Nacional de Convertibilidad para un país determinado.

Antes de que se concluya el proceso de revisión del Convertibility Index, para dejarlo establecido en su edición definitiva que es la tercera etapa del programa mencionado, es oportuno se proceda a una revisión también de la parte de la Minimum List relativa a la clasificación según el grado de elaboración y el uso. En efecto, los ajustes introducidos en el esquema básico pueden ser causa determinante de cambios correlativos en el esquema de clasificación del grado de elaboración y el uso, y otros ajustes en este último pueden ser oportunos, aún en forma independiente.

III. LABORES Y EXPERIENCIAS DE LA ESTADISTICA ECUATORIANA EN LA APLICACIÓN DE LA LISTA MÍNIMA Y PARA FORMACIÓN DEL INDICE NACIONAL DE CONVERTIBILIDAD

Las labores que los organismos estadísticos del Ecuador han efectuado hasta hoy y están desarrollando, para estructurar las estadísticas del comercio exterior de nuestro país según la Lista Mínima, y para elaborar el Indice Nacional de Convertibilidad, no carecen del todo de interés. Nuestras experiencias al respecto pueden ser en algunos puntos aprovechables en la realización ulterior del programa de conjunto interamericano, que constituye el objeto final de la actividad del IASI en este campo. El Ecuador es un país, como otros hay en América, que atraviesa actualmente la primera etapa formativa de una verdadera organización estadística nacional. Nos estamos enfrentando con las tareas propias de esta fase inicial, bien podemos decir con valor, decisión y entusiasmo, pero al mismo tiempo en lucha constante con los problemas propios de este difícil período, y con la angustiosa limitación de los medios materiales.

Las experiencias que se van acumulando en nuestro trabajo, en la materia objeto del presente examen, no dejan por lo tanto de tener un especial interés objetivo, particularmente con relación a las condiciones en que se desarrolla nuestra actividad, que posiblemente, en América, no son exclusivamente propias del Ecuador.

Las primeras labores para clasificar las estadísticas ecuatorianas del comercio exterior según la Minimum List datan del año 1944, en el cual se fundó por Decreto Ejecutivo No. 760, de 9 de agosto, la Dirección General de Estadística y Censos. En la primera etapa, el desarrollo de estos trabajos en

[7] *Convertibility Index for Foreign Trade Statistical Classifications of the American Nations*, p. xiv.

el plan nacional fué paralelo, pero independiente, de los trabajos conducidos por el IASI en el plan internacional e interamericano.

El Ecuador no había tenido hasta entonces una verdadera clasificación estadística del comercio exterior. La Dirección General de Aduanas clasificaba, y sigue clasificando, las importaciones según los párrafos e incisos del Arancel de Aduanas, bastante anticuado en su estructura básica. La llamada "adicional estadística" es en realidad un ulterior fraccionamiento, no siempre útil, de los párrafos e incisos en numerales más analíticos, que no da lugar en ninguna forma a un sistema de clasificación distinto del arancelario. La publicación de estas elaboraciones ha sido siempre fragmentaria y discontinua.

Una de las primeras preocupaciones de la Dirección General de Estadística y Censos del Ecuador, tan pronto como inició su funcionamiento, fué la de encontrar un esquema apropiado en un primer momento para reclasificar y reelaborar las estadísticas de la Dirección General de Aduanas, y luego, cuando las circunstancias los permitieran, asociar en un proceso coordinado y contemporáneo de codificación y clasificación, la elaboración de estadísticas aduaneras, con la de verdaderas estadísticas del comercio exterior.

Como base de los trabajos emprendidos para el efecto por la Asesoría Técnica de la Dirección se adoptó la Minimum List.

La Dirección General de Estadística del Ecuador no disponía, como ni hasta hoy dispone, de los pedidos de Aduanas relativos a las importaciones, ni de las pólizas de exportaciones, documentos sobre los que se basan la codificación y clasificación directa para las estadísticas de comercio exterior.

Por esta razón, en una primera fase, el problema estribaba, como ya hemos indicado, en encontrar una forma para reclasificar y reelaborar con el mínimo posible de imperfecciones, estadísticas ya elaboradas de la Dirección General de Aduanas. Siendo las exportaciones limitadas a muy pocos productos fundamentales, este problema debía ser puesto y resuelto bajo el ángulo visual de las importaciones. Se procedió en primer lugar a una traducción de la Minimum List al castellano, y luego a establecer la correspondencia entre cada item y sub-item de la Minimum List y un párrafo o inciso o parte de los mismos, o un grupo de párrafos o incisos o partes de los mismos, del Arancel Nacional de Aduanas. En otras palabras, se procedió con respecto al Arancel Nacional, análogamente a lo que se había hecho en la elaboración de la Minimum List entre los item de la misma y los del Draft Customs Nomenclature. Desde luego el Arancel Nacional de Aduanas no presenta las características de elaboración técnica moderna del Draft Customs Nomenclature, y establecer las equivalencias no podía ser siempre cosa fácil ni exentos de imperfecciones los resultados.

Como otra presentación de las equivalencias, importante para su uso práctico, se redactó también un elenco en orden numérico de los párrafos e incisos del Arancel Nacional de Aduanas, con la indicación, por cada uno de ellos, del item o de los item equivalentes de la Minimum List. La circunstancia de que muchos párrafos e incisos del Arancel comprendían mercaderías clasificables bajo item distintos de la Minimum List, impuso, hasta donde era posible, la división de estos párrafos e incisos en fracciones, para los efectos estadísticos, cada una relacionada con un solo item o sub-item de la Minimum List. Efectuado este fraccionamiento, se redactó el elenco correspondiente. En forma análoga se establecieron las equivalencias entre párrafos e incisos del Arancel Nacional de Aduanas, e item y sub-item de la Minimum List agrupados en el esquema de clasificación según el grado de elaboración y el uso

(Anexo No. 1 de la Minimum List). En el mismo anexo varios item figuran entre paréntesis por cuanto comprenden mercaderías que pueden servir a más de un uso o que tienen distintos grados de preparación. En este caso el item relativo debe ser clasificado, por cada país, en uno u otro de los grupos indicados alternativamente, según el grado de preparación y el uso de la mercadería en referencia, que prevalecen en el país cuyas estadísticas se elaboran. Esta elección se hizo, por lo que se refiere al Ecuador, durante los trabajos preparatorios de que estamos tratando.

Por efecto de haber elegido una u otra forma de agrupación, según el grado de preparación y el uso, se hizo necesario modificar el texto de algunos item fraccionados entre dos o más grupos, a fin de hacerlo corresponder más exactamente al contenido del item parcial. Sin embargo, estos retoques no alteraron nunca el sentido básico de la denominación original, y mucho menos el contenido substancial del item relativo.

Por efecto de haber elegido una u otra forma de agrupación, según el grado de preparación y el uso, se hizo necesario modificar el texto de algunos item fraccionados entre dos o más grupos, a fin de hacerlo corresponder más exactamente al contenido del item parcial. Sin embargo, estos retoques no alteraron nunca el sentido básico de la denominación original, y mucho menos el contenido substancial del item relativo.

Los resultados de los trabajos preparatorios hasta aquí resumidos se publicaron en julio de 1945.[8] Sobre esta base se procedió a reclasificar las estadísticas de Aduanas del Ecuador relativas a los años 1943 y 1944, y se elaboró en esta forma un *Anuario de Comercio Exterior* moldeado sobre la Minimum List en su misma estructura fundamental[9].

El Anuario se divide en cinco secciones: (I) Cuadros de resumen; (II) importaciones por artículos (secciones, capítulos e item de la Lista Mínima), por párrafos e incisos del Arancel de Aduanas y por países de procedencia; (III) exportaciones por artículos (secciones, capítulos e item de la Lista Mínima); (IV) intercambio comercial, por países; (V) importaciones y exportaciones clasificadas según el grado de preparación y el uso de las mercaderías.

La primera sección—cuadros de resumen—proporciona, en forma sintética, los datos que sirven para darse cuenta cabal, en grandes líneas, de las características más importantes del comercio exterior ecuatoriano en el bienio de que se trata. De sus 21 cuadros, 10 son dedicados a clasificaciones por productos, 5 a resúmenes por países, 5 a presentaciones por grupos según el grado de elaboración y el uso, y 1 al movimiento comercial por Aduanas.

De especial interés son, en esta sección, los cuadros, tanto de importaciones como de exportaciones, sistematizados por grandes rubros, luego por clases fundamentales de mercaderías, y por fin por grupos de artículos, de acuerdo con las secciones, los capítulos y los item de la Minimum List, respectivamente. La sucesión de estos caudros demuestra, con la elocuencia del ejemplo, la eficacia de la Lista Mínima para una clasificación clara, sencilla, correcta y significativa de las mercaderías, llegando gradualmente de las agrupaciones más sintéticas hasta las detalladas, y dejando luego la posi-

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[8] *Clasificación del Arancel de Aduanas del Ecuador según la Lista Mínima de Mercaderías para las Estadísticas del Comercio Internacional*, por el Dr. Carlos Procaccia, Cuadernos de Estadística, No. 2, Dirección General de Estadística y Censos, Quito, julio 1945.

[9] Dificultades de orden material han retrasado hasta hoy la publicación del *Anuario del Comercio Exterior del Ecuador* (1943-1944), cuya elaboración se concluyó en los primeros días de 1946. Sin embargo la publicación, aunque ya no oportuna desde el punto de vista de los datos, tendrá siempre interés, cuando se efectúe, como ensayo de sistematización estadística sobre la base de la Minimum List.

CUADRO 1

Grupos según el USO	a) Artículos en Bruto				b) Artículos que han sufrido una transformación simple				c) Artículos que han sufrido una transformación más avanzada				Totales según el uso y Generales			
	Importaciones	Exportaciones	Excedente		Importaciones	Exportaciones	Excedente		Importaciones	Exportaciones	Excedente		Importaciones	Exportaciones	Excedente	
			De las import.	De las export.			De las import.	De las export.			De las import.	De las export.			De las import.	De las export.
1																
.....																
.....																
.....																
.....																
.....																
.....																
.....																
.....																
.....																
.....																
10																
*																
Totales según el grado de elaboración y generales																

* Se exceptúan oro, monedas y artículos que no pueden ser clasificados según el grado de elaboración y el uso.

bilidad de una discriminación más analítica dentro de cada item, según las exigencias y las posibilidades estadísticas de los distintos países.

Siempre en la primera sección, dos cuadros presentan las inportaciones y las exportaciones, en porcentajes sobre el total, en los tres grupos según el grado de elaboración y en los 12 grupos según el uso, respectivamente. Otros dos cuadros presentan las importaciones y las exportaciones clasificadas combinando ambos criterios.

Por fin, un cuadro sistematizado según el esquema que se reproduce a continuación (cuadro 1) presenta el balance entre importaciones y exportaciones, bajo el punto de vista del grado de elaboración y el uso.

La segunda sección (importaciones clasificadas por Minimum List, por Arancel de Aduanas y por países) demuestra cómo se ha solucionado, de acuerdo con el material de que podíamos disponer, el problema de presentar

CUADRO 2

Secciones, capítulos e item de la Minimum List	Párrafos e incisos del arancel de aduanas y artículos comprendidos en los mismos	Países de procedencia	Peso y valor por países		Totales por artículos		Totales por posiciones de la Minimum List		Item No.
			Kilos	Sucres	Kilos	Sucres	Kilos	Sucres	
SECCION I									
Productos alimenticios, bebidas, tabaco									
CAPITULO 1									
Animales vivos destinados especialmente a la alimentación.									
1. Especie bovina	1. Animales de toda clase para el mejoramiento de la especie:								
	Toros	Argentina	xxxx	xxxx					
		Colombia	xxxx	xxxx	xxxxx	xxxxx			
		etc.							
	Vacas	Argentina	xxxx	xxxx					
		Cuba	xxxx	xxxx					
		E.E.U.U. etc.	xxxx	xxxx	xxxxx	xxxxx			
	Terneros	Argentina	xxxx	xxxx					
		Chile	xxxx	xxxx	xxxxx	xxxxx	xxxxxx	xxxxxx	1
2. Especie ovina	Borregos y ovejas	Argentina, etc.	xxxx	xxxx	xxxxx	xxxxx	xxxxxx	xxxxxx	2
3. Especie porcina	Cerdos	Chile, etc.	xxxx	xxxx	xxxxx	xxxxx	xxxxxx	xxxxxx	3
4. Aves de corral	2. Animales y aves de corral, vivos:								
	Gallos y gallinas	E.E.U.U.	xxxx	xxxx	xxxxx	xxxxx			
	Pollitos	Argentina,	xxxx	xxxx					
		Chile,	xxxx	xxxx	xxxxx	xxxxx	xxxxxx	xxxxxx	4
		etc.							
Total Capítulo 1							xxxxxxx	xxxxxxx	

los datos bajo la doble clasificación, comercial según la Minimum List y arancelaria.

Las grandes agrupaciones (secciones y capítulos) son exclusivamente las de la Minimum List. Bajo cada uno de los capítulos, se detallan los item relativos a las mercaderías de las cuales hubo importación en los años en referencia; bajo cada item, los párrafos e incisos del Arancel de Aduanas, enteros o fraccionados; bajo cada párrafo o inciso (eventualmete) las clases de mercaderías comprendidas en el mismo que por su importancia sea oportuno hacer constar por separado; y, por fin, con relación a cada una de las clases más analíticas, el detalle por países de procedencia.

A continuación (cuadro 2) reproducimos como ejemplo, en forma esquemática, la parte del cuadro básico de la segunda sección, relativa al primer capítulo.[10]

Para hacer posible la consulta de esta sección tanto bajo la clasificación comercial como bajo la arancelaria, se incorporó en la sección II del Anuario un Cuadro de Referencia con dos columnas, anotando en la primera, en orden numérico, los párrafos e incisos del Arancel de Aduanas (excepto los que no han figurado con importaciones), y en la segunda el número del item o sub-item, o, tratándose de párrafos fraccionados, de los item y sub-item, bajo cuya clasificación se encuentra el párrafo o fracción de párrafo y las cantidades relativas.

En varios casos nos encontramos en la imposibilidad material de fraccionar un párrafo o inciso, hasta el punto necesario para separar una mercadería o un grupo de mercaderías comprendidas en un item de los incluidos en otro item de la Minimum List. En este caso el párrafo o fracción se clasificaron bajo el item que, de acuerdo con los caracteres conocidos del comercio ecuatoriano de importación, los cubría en su mayor parte. Al número de los párrafos cuyo contenido no coincidía integralmente con el item, bajo el cual habían sido clasificados, se hizo preceder, como signo convencional, un asterisco.

Con relación a las exportaciones por productos y por países (sección III del Anuario) no ha sido mantenida la doble clasificación, por cuanto la clasificación anteriormente en uso para las exportaciones no tiene la importancia y la difusión de la arancelaria, ni el carácter necesariamente permanente de esta última, y puede ser suprimida sin inconvenientes. Sin embargo, en relación con varios item de la Minimum List, pareció oportuno, aún para un comercio de exportación muy poco diversificado como el ecuatoriano, proceder a una subclasificación, sea para no englobar bajo una dicción genérica productos que en nuestro comercio tienen especial importancia, sea para no revestir de amplias y comprensivas denominaciones mercaderías bien delimitadas, en muchos casos de escasa importancia tanto cualitativa como cuantitativamente.[11]

En las importaciones, la enumeración expresa bajo cada item del texto de los párrafos o incisos del Arancel y da siempre un contenido concreto y delimitado al enunciado del item, aún cuando sea éste genérico o mucho más

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[10] La época en que se efectuó la elaboración no permitió aplicar los ajustes de la Minimum List para los efectos del Basic Classification Scheme, que aún no había sido publicada.

[11] Para aclarar el concepto con algunos ejemplos, habría sido inoportuno incluir sin especificación bajo el item subsidiario 416 (Productos vegetales n.c.o.) mercaderías de exportación tan importantes para el Ecuador como la tagua, en sus variedades: En cáscara, pilada y cortada; y la lana vegetal o de ceibo; igualmente inoportuno, aún por opuestas razones, habría sido indicar bajo la amplia denominación de "Vestidos no de tejidos de punto" (item 251) una modestísima partida de ponchos.

comprensivo. Para obtener un resultado análogo con relación a las exportaciones, se adoptaron dos medidas: De un lado se substituyó a la dicción standard del item, cada vez que fuera necesario, otra dicción más concreta, con referencia a los productos efectivamente exportados; de otro lado, bajo la clasificación por item se especificó, siempre cuando fuere necesario y conveniente, las categorías más importantes de mercaderías exportadas y bajo estas últimas categorías, el detalle por países de destino.

La sección IV del Anuario (intercambio comercial por países) presenta por cada país (en orden alfabético dentro del respectivo continente) las importaciones y las exportaciones, unas y otras clasificadas bajo los item de la Lista Mínima. Aquí también la dicción del item no ha sido conservada en la forma standard, sino delimitada concretamente según la mercadería o las mercaderías más importantes comprendidas bajo el mismo item y efectivamente importadas o exportadas con procedencia o destino del o al país del cual se trata. Esta medida no sólo es útil, por las razones ya indicadas, para el uso del Anuario en el ámbito nacional, sino que hace también mucho más efectivo el control para los fines de la uniformidad y comparabilidad internacionales. El número del item asegura en todo caso la identificación de acuerdo con el esquema básico; la dicción, si es genérica, no permite conocer lo que se ha clasificado en el caso concreto bajo el item; mientras si es específica, proporciona también la posibilidad de rectificar la clasificación en los casos en que ha sido inexacta.

La última sección del Anuario (V) presenta la clasificación analítica de las importaciones y de las exportaciones según el grado de elaboración y el uso; para este fin se ha mantenido la clasificación de las mercaderías por item de la Minimum List, agrupando estos últimos en las 12 categorías de clasificación según el uso, y dentro de cada una de ellas en los grupos pertinentes (de un mínimo de 1 a un máximo de 3) según el grado de elaboración.

La reelaboración de las estadísticas de Aduanas, en la forma hasta aquí indicada[12] deberá efectuarse también con relación al comercio exterior de 1945, 1946 y 1947.

Para principios del año 1948 esperamos puedan ser ya completados los instrumentos técnicos y arbitradas las medidas de organización, para poner en marcha la doble elaboración directa sobre documentos individuales, bajo el esquema arancelario y de acuerdo con el Basic Classification Scheme.

En el campo técnico, la medida más importante que debe ser completada es el Indice Nacional de Conversión. Los trabajos necesarios para el efecto, se iniciaron en la Dirección General de Estadística y Censos durante los primeros meses de 1946, y después de un período de menor intensidad, debido a razones contingentes, se han vuelto a activar en el segundo trimestre del presente año.

La sucesión de los pasos o etapas, que se aconseja en el Prefacio del Convertibility Index, ha sido algo modificada, de acuerdo con los antecedentes ya adquiridos en nuestras labores previas sobre la misma materia. En efecto, la reelaboración de las estadísticas aduaneras nos dejó un material relativamente abundante, clasificado por párrafos e incisos del Arancel de Aduanas y por item de la Minimum List. El primer paso para la formación del Indice Nacional de Convertibilidad fué por lo tanto, organizar un tarjetario

[12] Por falta, hasta la presente fecha (mayo de 1947) de un equipo mecánico para estadística en la Dirección General de Estadística y Censos del Ecuador, toda la elaboración del *Anuario de Comercio Exterior* de 1943-1944 debió efectuarse manualmente.

de mercaderías, ordenado por párrafos e incisos del Arancel Nacional de Aduanas. Cada una de estas tarjetas tiene anotados dos números de clasificación: Párrafo e inciso del Arancel de Aduanas e item de la Minimum List. Como segundo paso se ha ordenado todo el material de tarjetas por item, sub-item y fracciones del Basic Classification Scheme. Como tercer paso, ya tenemos adelantada[13] la revisión del tarjetario ordenado en esta última forma, tanto con el fin de controlar y eventualmente rectificar la clasificación de las mercaderías ya incluidas, de acuerdo con el Esquema Básico, como para efectuar nuevas inclusiones, bajo el item pertinente, de mercaderías de interés para el comercio exterior ecuatoriano. Para este último fin estamos utilizando especialmente los permisos de importación otorgados por la Dirección de Comercio Exterior a partir del mes de diciembre de 1946. Estos permisos, un ejemplar de los cuales nuestro Departamento recibe sistemáticamente, contienen una descripción bastante analítica de las mercaderías, con su denominación comercial corriente.

Para revisar y completar las mercaderías clasificadas según el Basic Classification Scheme, la edición preliminar del Convertibility Index ha sido, naturalmente, nuestra guía fundamental. También hemos continuado utilizando directamente el Draft Customs Nomenclature, para resolver, dentro del espíritu mismo del Convertibility Index, los problemas más importantes de Clasificación.[14]

Ultimada la revisión, redactaremos el elenco de mercaderías (términos individuales de inclusión) ordenado bajo item, sub-item y fracciones del Basic Classification Scheme y con referencia a la numeración aduanera (paso No. 5).[15] Volveremos luego a ordenar las tarjetas por párrafos e incisos del Arancel de Aduanas (paso opcional No. 8) y redactaremos el elenco de mercaderías (términos individuales de inclusión) ordenado bajo la clasificación aduanera y con referencia al Basic Classification Scheme (paso opcional No. 9). El Indice Nacional de Convertibilidad será concluido con la redacción del índice general alfabético de los términos individuales de inclusión, con referencia a la numeración del Basic Classification Scheme y a la aduanera (paso No. 7).

Consideramos muy útil para la ejecución efectiva de un plan sistemático de elaboración de nuestras estadísticas del comercio exterior de acuerdo con la Minimum List, redactar el elenco de mercaderías ordenado bajo la numeración de los párrafos e incisos del Arancel de Aduanas (pasos opcionales Nos. 8 y 9). En efecto, en cualquiera oficina que se ejecute la codificación de los pedidos aduaneros de importación (documentos individuales de cada acto de importación realizado) estos documentos llegan al codificador con la anotación ya definitiva por parte de los órganos fiscalizadores aduaneros, del párrafo e inciso del Arancel bajo el cual han sido aforadas las mercaderías incluidas en el pedido. Es por lo tanto evidente que ordenando los documentos que se codifiquen en un intervalo determinado de tiempo, por párrafos e incisos del Arancel de Aduanas, la codificación por categorías elementales de la Minimum List será mucho más rápida será y segura, por cuanto se codi-

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[13] Mayo de 1947.

[14] Las notas que hemos venido acumulando en el curso de estos trabajos de interpretación y aplicación de la Minimum List sobre la base del Draft Customs Nomenclature y del Convertibility Index, las estamos reuniendo y sistematizando en una *Guía para la Clasificación de las Estadísticas del Comercio Exterior según la Minimum List*, que podrá ser de alguna utilidad como auxiliar en la elaboración y aplicación de los Indices Nacionales de Convertibilidad. (Nota del editor: Esta *Guía* fué publicada en agosto de 1947.)

[15] La indicación entre paréntesis de los pasos del procedimiento de elaboración del Indice de Conversión Nacional, se refiere al programa incluido en el Prefacio del Convertibility Index, edición preliminar.

ficarán en continuación mercaderías relativamente homogéneas. Además, teniendo presente la parte del Indice Nacional de Convertibilidad con los términos de inclusión agrupados bajo el párrafo e inciso que se refiere a los pedidos que se están codificando, el elaborador podrá resolver con grande ahorro de tiempo todas las dudas que se le presentaren en el proceso de su trabajo.

Codificados los pedidos de Aduanas bajo la doble clasificación (arancelaria, y comercial de acuerdo con el Basic Classification Scheme), se procederá a la perforación de las fichas con la inclusión de todos los conceptos necesarios, y podrán ser tabulados los datos y presentados los cuadros definitivos, en forma análoga a la adoptada para nuestro *Anuario de Comercio Exterior* de 1943-44.

Como base para el desarrollo armónico de la elaboración bajo el doble esquema, hemos proyectado una ficha con los campos ya caracterizados y delimitados; ficha que, con las adaptaciones del caso, pudiera servir también a la elaboración que se efectúe, con programa y en condiciones análogos, en otros países.

Reproducimos a continuación el modelo de tarjeta (cuadro 3).

Aún en relación con el número mínimo de 80 dígitos, quedan 6 dígitos disponibles para la amplicación de algunos de los campos o para la inclusión de conceptos adicionales.

En el Ecuador es probable que, por razones de oportunidad práctica, el conjunto de las elaboraciones indicadas deba efectuarse en la Oficina de Estadística de la Dirección General de Aduanas, que tiene la disponibilidad inmediata y constante del material básico de los datos primitivos y disfruta de un equipo mecánico para estadística.

Los artículos 2 y 4 de la Ley de Estadística vigente en el Ecuador[16] permiten a la Dirección General de Estadística y Censos conservar el pleno control técnico de las elaboraciones, aún cuando éstas se efectúen en la Oficina de Estadística de Aduanas.

IV. ALGUNAS CONCLUSIONES PROVISIONALES

Las anotaciones y experiencias arriba espuestas permiten formular algunas conclusiones provisionales, susceptibles de servir como base para discusiones concretas y conclusiones ulteriores. Las enunciamos a continuación:

(a) La aplicación de la Minimum List, en la forma del Basic Classification Scheme del IASI, permite obtener estadísticas del comercio exterior no sólo uniformes y comparables en el plan interamericano y mundial, sino también mucho más ordenadas, claras, significativas, y por lo tanto mucho más útiles aún en el ámbito nacional, de buena parte de las estadísticas corrientes en este ramo, que se ciñen casi exclusivamente a la clasificación aduanera.

(b) Los trabajos necesarios para la aplicación de la Minimum List a las estadísticas nacionales del comercio exterior, pueden ser satisfechos también por organismos estadísticos de un grado de desarrollo no muy avanzado. Es fundamental para el efecto, que un restringido grupo de empleados bien orientados, bajo un eficiente control técnico inmediato, prepare los índices de clasificación adecuados, y se haga cargo de su aplicación efectiva, por lo menos hasta dejar en marcha la organización permanente de las elaboraciones. El Indice de Conversión Nacional, de acuerdo con el sistema planeado por el IASI, es el más importante instrumento técnico para los fines indicados.

(c) La reclasificación según la Minimum List de estadísticas de comercio exterior

[16] Por el art. 1 de la citada Ley (Decreto Ejecutivo No. 760 de agosto 9 de 1944) la Dirección General de Estadística y Censos es el único órgano directivo y centralizador, para todos los trabajos estadísticos y censales de la Nación. Por el art. 4, todas las entidades de Derecho Público están en la obligación de sujetarse a las disposiciones que la misma Dirección General establezca para operaciones y recopilaciones estadísticas.

CUADRO 3

Fecha			No. Pedido	Aduana	País	Nomenclatura arancelaria		Lista Minimum							Cantidades			Valor en sucres	Clase tarifa	Derechos		
Día	Mes	Año				Párrafo	Inciso	Sección	Capítulo	Item	Sub-item	Fracción	Grado elaboración	Uso	Peso en kilos	Unidad	Número u otra medida			Clase	Específicos Sucres	Ad-valorem Sucres
00	00	00	000000	00	000	0000	00	00	00	000	0	0	0	0	0000000	0	000000	00000000	0	0	00000000	00000000
11	11	11	111111	11	111	1111	11	11	11	111	1	1	1	1	1111111	1	111111	111111111	1	1	111111111	111111111
22	22	22	222222	22	222	2222	22	22	22	222	2	2	2	2	2222222	2	222222	222222222	2	2	222222222	222222222
33	33	33	333333	33	333	3333	33	33	33	333	3	3	3	3	3333333	3	333333	333333333	3	3	333333333	333333333
44	44	44	444444	44	444	4444	44	44	44	444	4	4	4	4	4444444	4	444444	444444444	4	4	444444444	444444444
55	55	55	555555	55	555	5555	55	55	55	555	5	5	5	5	5555555	5	555555	555555555	5	5	555555555	555555555
66	66	66	666666	66	666	6666	66	66	66	666	6	6	6	6	6666666	6	666666	666666666	6	6	666666666	666666666
77	77	77	777777	77	777	7777	77	77	77	777	7	7	7	7	7777777	7	777777	777777777	7	7	777777777	777777777
88	88	88	888888	88	888	8888	88	88	88	888	8	8	8	8	8888888	8	888888	888888888	8	8	888888888	888888888
99	99	99	999999	99	999	9999	99	99	99	999	9	9	9	9	9999999	9	999999	999999999	9	9	999999999	999999999
1 2	3 4	5 6	7 8 9 10 11 12	13 14	15 16 17	18 19 20 21	22 23	24 25	26 27	28 29 30	31	32	33	34	35 36 37 38 39 40 41	42	43 44 45 46 47 48	49 50 51 52 53 54 55 56	57	58	59 60 61 62 63 64 65 66	67 68 69 70 71 72 73 74

IBM 5080

000000	75 76 77 78 79 80
111111	75 76 77 78 79 80
222222	75 76 77 78 79 80
333333	75 76 77 78 79 80
444444	75 76 77 78 79 80
555555	75 76 77 78 79 80
666666	75 76 77 78 79 80
777777	75 76 77 78 79 80
888888	75 76 77 78 79 80
999999	75 76 77 78 79 80

ya elaboradas de acuerdo con esquemas aduaneros, es posible, con resultados relativamente satisfactorios, a pesar de inevitables deficiencias. Esta medida se aconseja para reelaborar las estadísticas de estos últimos años, hasta que se completen los trabajos previos y ponga en marcha la organización para aplicar directa e integralmente la Minimum List. La reclasificatión es útil también para facilitar el traspaso de la antigua a la nueva forma de clasificación, sin interrupciones bruscas de las series.

(d) Puede adoptarse con resultados útiles un doble esquema de clasificación según la nomenclatura aduanera y de acuerdo con el Basic Classification Scheme, manteniendo esta última en su integridad, y adoptando la nomenclatura aduanera sólo en forma de clasificación más analítica dentro de los item, sub-item y fracciones del Basic Classification Scheme.

(e) Una clasificación más detallada, dentro de las unidades elementales de la Minimum List, es aconsejable para los cuadros que por su naturaleza exigen una presentación analítica, de un lado para evitar que mercaderías de relativa importancia en el comercio exterior del país queden englobadas y no individualizadas, y de otro lado para evitar que mercaderías aisladas, de escasa importancia, figuren con denominación genérica, de carácter mucho más comprensivo.

(f) Las cifras totales por item, sub-item y fracciones de la Minimum List pueden proporcionar estadísticas con un detalle intermedio, equilibrado entre las muy sintéticas y las muy analíticas, especialmente apropiado para la presentación del intercambio comercial por países y de la clasificación de las importaciones y exportaciones según el grado de elaboración y el uso. Sin embargo, es oportuno modificar caso por caso la denominación del item, en forma que se adhiera más estrictamente al contenido abarcado en cada caso concreto. Esta medida se aconseja especialmente cuando la denominación standard del item es muy genérica, y entre las mercaderías incluidas en el mismo item están comprendidas algunas de especial interés, de acuerdo con la estructura del comercio exterior del país.

(g) La codificación y clasificación contextual, según la nomenclatura aduanera y la Minimum List, no presentan problemas insolubles en el caso de elaboración manual, y pueden efectuarse en forma bastante sencilla con la elaboración mecánica.

(h) También la clasificación según el grado de preparación y el uso de las mercaderías, de suma importancia, y que en ningún caso deberá ser omitida, deriva naturalmente de la clasificación básica de las mercaderías, según la Minimum List, y puede quedar incluida sin mayor dificultad en el conjunto de la elaboración, de acuerdo con este sistema, tanto en el caso de elaboración manual, como y más fácilmente, en el caso de elaboración mecánica.

(i) El hecho de que proceda a las elaboraciones una oficina central de Aduanas o un organismo exclusivamente estadístico, no tiene en principio importancia para la exacta y eficaz aplicación del sistema. Puede ser, sin embargo, aconsejable en países de desarrollo estadístico incipiente, que la codificación y clasificación en la doble forma se centralicen en una oficina de estadística de Aduanas, bajo un adecuado control técnico.

(j) Las labores del IASI para mejorar la comparabilidad de las estadísticas del comercio exterior del Hemisferio Occidental, tienen trascendental importancia, no sólo para sus fines específicos, sino también por cuanto establecen un punto de vista y criterios de acción hondamente innovadores, en materia de standards internacionales. La innovación consiste esencialmente en el proceso orgánico de elaboración del standard, durante el cual se toman en cuenta las necesidades y posibilidades de todos los países que deberán aplicarlo, y se elaboran conjuntamente los instrumentos técnicos apropiados para asegurar su efectiva aplicación.

V. RESUMEN

La necesidad de obtener estadísticas del comercio exterior comparables internacionalmente, mediante la elaboración y publicación anual de las importaciones y exportaciones clasificadas de un modo uniforme, es evidente y universalmente sentida. En la década de 1935 a 1945, se procuró conseguir este fin mediante la clasificación subsidiaria, según un esquema internacional (la Minimum List publicada por primera vez en 1935), de estadísticas nacionales, cuya clasificación principal era generalmente sobre la base aduanera. Una nueva etapa se abre con la elaboración y publicación por el IASI del Convertibility Index (octubre de 1945), y continúa con las labores en curso para estructurar el mismo Index definitivamente y asegurar su efectiva aplicación en todos los países americanos.

Los trabajos necesarios para este fin, que culminan, en su fase preparatoria, con el "Indice Nacional de Conversión," están también al alcance de organismos estadísticos de desarrollo no muy avanzado, con tal que se ponga en obra un esfuerzo inteligente y una constante actividad.

En el Ecuador, durante 1945, se reelaboraron según la Minimum List las estadísticas de Aduanas relativas al comercio exterior de 1943-1944. En el presente estudio se reproducen esquemáticamente algunos de los cuadros básicos del Anuario así estructurado. Actualmente, utilizando el material adquirido durante estas elaboraciones, se está formando el Indice Nacional de Convertibilidad de acuerdo con el Convertibility Index del IASI.

En las elaboraciones relativas a 1943-1944 se adoptó la Minimum List para la estructuración básica y las categorías de clasificación (secciones, capítulos, item, sub-item); y la nomenclatura aduanera para la clasificación más analítica, dentro de las unidades elementales de la Minimum List. Se evitó así que mercaderías importantes quedaran englobadas en totalizaciones sin especificación. Para el mismo fin, en las presentaciones cuya unidad más analítica que dá el item o sub-item de la Minimum List (como en los cuadros de intercambio comercial por países, o de clasificación según el grado de elaboración y uso), se formuló la dicción del item más concretamente, de acuerdo con las mercaderías clasificadas.

Estos mismos criterios se aplicarán en la clasificación directa sobre documentos individuales, de acuerdo con el Basic Classification Scheme y en conexión con la nomenclatura aduanera, que se espera efectuar a partir de 1948.

* * *

THE MONTHLY REPORT ON THE LABOR FORCE

By Edwin D. Goldfield, Joseph Steinberg, and Emmett H. Welch, U.S.A.*

RESUMEN

El Informe Mensual sobre la Fuerza de Trabajo que prepara la Dirección del Censo de los Estados Unidos, presenta datos básicos puestos al día sobre la fuerza de trabajo, empleo y desempleo en los Estados Unidos. Este informe se basa en los datos obtenidos mediante entrevistas personales directas hechas mensualmente entre una muestra de alrededor de 25,000 familias censales, cuidadosamente elegida siguiendo los métodos científicos del muestreo, de manera que represente la población de los Estados Unidos.

Se dió comienzo a la publicación del Informe Mensual sobre la Fuerza de Trabajo, con ocasión del Censo Decenal de Población, en 1940. Desde entonces, los estudios mensuales han ido midiendo los cambios de importancia en la fuerza de trabajo, empleo y desempleo. No obstante existir mediciones del empleo y desempleo en varios sectores de la economía, solamente un censo o una enumeración por muestra de la población pueden proporcionar una medida completa del número total de personas empleadas, incluyendo los que trabajan por cuenta propia, y del número total de personas desempleadas.

Aparte de su propósito original de proporcionar estimaciones de la fuerza de trabajo, empleo y desempleo precisas y al día, el estudio mensual también produce información acerca de las ocupaciones de la fuerza de trabajo, las horas trabajadas por los individuos empleados, el tiempo que dura sin trabajo el desempleado, y la clasificación de las personas no incluidas en la fuerza de trabajo, tales como dueñas de casa, estudiantes, etc. También se ofrecen datos sobre la edad, sexo y otras características de las personas en cada una de las categorías más importantes.

Las preguntas que se piden en la investigación, principalmente tienden a determinar si una persona pertenece a la fuerza de trabajo (empleado o buscando empleo) o no pertenece a la fuerza de trabajo. Las preguntas se refieren a la actividad de cada persona durante la semana que comprende el octavo día de cada mes. Las preguntas sobre la situación de la fuerza de trabajo y los aspectos relacionados con ella, solo se piden a las personas de 14 o más años de edad, en atención a que la experiencia ha demostrado que en los Estados Unidos muy pocas personas de menos de 14 años son fuerza de trabajo.

La muestra utilizada para la investigación abarca 68 áreas, cada una de ellas integrada por uno o más condados (counties), en distintas zonas de los Estados Unidos. Cada área fué elegida de un estrato compuesto por un grupo de áreas similares con respecto al grado de urbanización, localización geográfica, clase de industria y otros factores. El método de selección de una área en cada estrato fué tal que la probabilidad de cualquier área elegida debía ser proporcional a su población según último Censo Federal.

Mensualmente, los resultados de la muestra ponderada se ajustan a las estimaciones independientes de la población, calculadas por ajuste a los totales que arrojaron los censos más re-

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cientes, al aumento de la edad de la población, a la mortalidad y a la migración que se han presentado desde el censo. A continuación de estas operaciones, se procede a las tabulaciones que producen las estimaciones del empleo, desempleo, etc.

Los resultados más importantes los publica la Dirección del Censo de los Estados Unidos en una serie de entregas bajo el título, "Current Population Reports: Monthly Report on the Labor Force" (Series P-57).

The Monthly Report on the Labor Force, published by the United States Bureau of the Census, presents basic current information on the labor force, employment, and unemployment in the United States. It is based on data obtained through direct personal interviews each month with a sample of about 25,000 households, scattered throughout the United States. The households are carefully selected by scientific sampling methods to represent the total population, except persons in the armed forces and in certain kinds of institutions.

Prior to the beginning of the Monthly Report on the Labor Force in 1940, the labor force in the United States was measured every ten years in connection with the decennial population censuses. In the absence of current measurement, several government and private organizations prepared estimates of the labor force and of unemployment. There was much disagreement among these various estimates and considerable confusion resulted. At the present time the figures obtained by the monthly survey made by the Bureau of the Census are generally accepted and widely used by both government agencies and private groups.

Although estimates of employment in various parts of the economy are available in the reports of the Department of Labor, the Department of Agriculture, the Social Security Administration, and other agencies, the Monthly Report on the Labor Force provides the only means of directly estimating the total number of workers, including self-employed and unemployed persons. Furthermore, in a direct survey of this type, it is insured that each employed worker is counted only once, whereas in estimates based on employers' payrolls, some workers are counted more than once when they appear on more than one payroll during the specified period.

An important function of this survey is to estimate the total number of unemployed. This can best be done by means of a direct interview with workers or their families, since unemployed workers are not found on employers' payrolls, and not all of them report their unemployment to the employment offices or the unemployment compensation agencies. (In a country where it is customary or compulsory for *all* unemployed workers to register with a centralized official agency, a direct population survey might not be necessary to provide comprehensive unemployment statistics.)

By counting in a consistent fashion both the employed and the unemployed workers, it is possible to obtain a count of the total number of persons in the labor force.

Aside from its primary purpose of providing accurate and up-to-date national estimates of the labor force, employment, and unemployment, this survey also yields much important information on the characteristics of persons both in and outside the labor force. Among the additional items covered by the survey are the occupations of the labor force, the number of hours worked by employed persons, reasons for absence from work, the length of time without work for the unemployed, and the classification of persons

not in the labor force as housewives, students, etc. Data on the age, sex, veteran status, and marital status of persons in each of the major categories are also provided.

The Monthly Report on the Labor Force measured the enormous changes that took place in the labor force of the United States during the war years. It portrayed the virtual disappearance of unemployment, which dwindled from over eight million in 1940 to less than a million at the war's end. It showed the month-to-month changes in the size and composition of the civilian labor force that were brought about by the demands of war production and the transfer of workers to the armed forces. It measured the expansion of the total labor force, which amounted to more than ten million, including 3½ million boys and girls who would normally have been students, 2 million housewives, and 1½ million older or handicapped workers, in addition to the normal growth of 3 million during the period. Other wartime developments such as the replacement of men by women in various industry and occupation groups were also recorded by this monthly survey.

During the past two years, the survey has shown what has happened to the wartime labor force as some of the trends of the preceding five years have been reversed. It has provided and is continuing to provide answers to such questions as how many young workers are going back to school to finish their education; how rapidly women who took jobs because of the war are leaving the labor force; what has happened to the hundreds of thousands of workers who were laid off by war industries; how long the jobless remain unemployed; and how rapidly veterans of World War II return to the labor force and obtain jobs.

DEFINITIONS OF LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT

Labor force. The labor force comprises the total of all persons who are employed, unemployed, or in the armed forces. Other persons are described as nonworkers, or persons not in the labor force. Since the number of persons in the armed forces is available from official records, the survey is confined to the civilian population. The questions asked are designed primarily to determine whether each person is in the labor force (employed or seeking employment), or not in the labor force. These questions are confined to persons 14 years old and over, since experience has shown that in the United States very few children under 14 years of age are in the labor force. Children under 14 generally do not work because of laws which restrict child labor, laws regarding compulsory school attendance, and general social custom.

The questions relate to each person's activity during the week which includes the 8th of the month.

Employed persons. Employed persons comprise (a) All those who, during the specified week, did any work at all as a paid employee of someone else or in their own business or profession, or who worked 15 hours or more as an unpaid worker on a farm or in a business operated by a member of the family, and (b) all those who were not working or looking for work but who had jobs from which they were temporarily absent because of illness, bad weather, vacation, labor-management dispute, or because they were temporarily laid off with definite instructions to return to work within 30 days of layoff. Also included are persons who had acquired new jobs or were about to begin new enterprises, but had not yet actually begun to work.

Unemployed persons. Unemployed persons are defined as persons who did not work at all during the specified week, and were looking for work. Persons who both worked and looked for work are classified as employed, even though they may have spent most of their time looking for work. The term "looking for work" includes not only visiting prospective employers but also registration in a public or private employment office, placing or answering advertisements, and similar efforts to secure a job. Included also as unemployed are persons who would have been actively looking for work except that they were temporarily ill, that they believed no work was available in their line of work in the community, or that they expected to return to jobs from which they had been laid off for an indefinite period.

Not in the labor force. All persons 14 years old and over who are neither employed nor unemployed in accordance with the above definitions and who are not members of the armed forces are defined as "not in the labor force." They are classified into the following groups: (a) Persons engaged in housework in their own homes, (b) persons in school, (c) inmates of certain kinds of institutions, such as prisons, mental hospitals, and homes for the aged, infirm and needy (these persons are automatically excluded from the labor force, and therefore need not be interviewed in the survey), and (d) other persons, consisting mainly of retired and disabled persons, who had no jobs and were not looking for jobs. It should be clearly noted that persons whose major activity was taking care of their homes, going to school, etc., were classified as not in the labor force only after it was determined that they were not also employed or looking for employment, as defined above.

Comparison with statistics of gainful workers. The concept of the "labor force," as used by the Bureau of the Census in the 1940 Census of Population and since then in the Monthly Report on the Labor Force, differs from the concept of "gainful workers" which formed the basis of the statistics collected n the censuses of 1930 and earlier years. Gainful workers were defined as persons reporting a gainful occupation, that is, an occupation at which they earned money or a money equivalent, or in which they assisted in the production of marketable goods. Some persons were reported as gainful workers even though they were not actually employed or looking for employment (and therefore were not in the labor force) at the time of the census. On the other hand, persons who had never worked before but were looking for work would have been counted in the labor force, but were not counted as gainful workers because they had no occupation to report. Another difference is that the question on gainful occupation was asked of all persons 10 years old and over in the earlier censuses, whereas the current labor force questions are restricted to persons 14 years old and over. In general, the total numbers of persons reported as gainful workers in the censuses of 1930 and earlier were probably slightly greater than the numbers of persons who would have been reported as in the labor force for the same dates.

DESCRIPTION OF THE SAMPLE[1]

Sample areas. The Current Population Survey sample, which provides the basis for the Monthly Report on the Labor Force, includes 68 sample areas, comprising 125 counties and independent cities located in 42 States,

[1] For a more detailed description of the sample prior to August, 1947, see Morris H. Hansen and William N. Hurwitz, "A New Sample of the Population," in *Estadística* for December, 1944.

and the District of Columbia. Each sample area consists of at least one county and may comprise two or three contiguous counties or parts of counties.

The counties of the United States, numbering about 3,000, were combined into approximately 2,000 primary sampling units. The primary sampling units were defined to make each one as heterogeneous as possible within the limits imposed by the requirement that each be small enough to be covered by a supervisor and enumerating staff working out of one local office.

A typical primary sampling unit includes both urban and rural residents of high and low economic level, and provides a broad representation of occupations and industries. The 2,000 primary sampling units were classified into 68 strata. The primary sampling units placed in any one stratum were similar with respect to such factors as degree of urbanization, geographic location, extent of wartime migration, proportion of the labor force engaged in manufacturing, and type of farming. In some cases, stratification by type of industry (aircraft, shipbuilding, textile) or by color was also utilized. Each of the 12 largest metropolitan areas was established as a separate stratum and was included as one of the 68 sample areas. In each of the remaining strata one primary sampling unit was chosen to represent the stratum. The choice of the sample area was made by a procedure which made the probability that a particular primary sampling unit would be selected proportional to its population in the last Federal Census.

Sample households. In determining the approximate number of households to be interviewed throughout all the sample areas an attempt was made to obtain a sample that would be of minimum size and yet provide relatively reliable national estimates of the principal labor force statistics.

For each stratum an over-all sampling ratio of 1 in about 1,500 is used. This gives about 25,000 households for the nation as a whole. The sampling ratio used in each particular sample area depends on the relative proportion that the sample area population (at the time of the last Federal Census) was of the stratum population. Thus, in a sample area which was one-tenth of the stratum, the sampling ratio is 1 in 150, which results in a ratio of 1 in about 1,500 for the stratum.

In each area the precise number of households to be interviewed each month is calculated by the application of this sampling ratio rather than through the assignment of a fixed quota. This procedure makes it possible for the sample to reflect any shifts in population. For example, if, on the basis of the last census, a sampling ratio of 1 dwelling unit in every 150 is used in a sample area, the number of households in the sample will be larger than obtained by a fixed quota in areas where the number of households has increased since the census. In areas where the number of households has declined, the number of sample households will be smaller. In this way, the sample properly reflects the changing distribution of the population during a period of migration, and avoids the distortion which would result from the application of fixed quotas of households or persons based on the population at an earlier date.

The method used in selecting households for inclusion in the sample provides reliable survey results at a minimum cost. To accomplish this, an indication was obtained of the number of dwelling units in small geographic areas (blocks, parts of blocks, or similar areas) within each sample area. For the larger urban places information regarding number and location of dwelling

units is obtained from large-scale maps which show the general outline of each dwelling unit. These maps are available for almost every urban place of 25,000 inhabitants or more as well as for a number of the smaller places. Where such maps are not available the number of dwelling units in small geographic areas bounded by roads, streams, etc. was determined by field count or by counting from aerial photographs or county highway maps.

Thus, each sample area was divided into small geographic areas with well defined boundaries and for each of which there is an indication of the number of dwelling units.

Within each sample area a designated proportion of the small geographic areas was selected for inclusion in the sample. A list of all dwelling units within each of the selected geographic areas was prepared and clusters of six contiguous dwelling units were selected for enumeration. In densely populated and urban areas, for which large-scale maps showing the location of each dwelling unit are available, small areas containing about six dwelling units were delineated and selected directly, without the necessity of making a list of dwelling units.

Each sample household is interviewed for six or seven successive months, and then is replaced by another, in order to avoid making the interviews burdensome to the household through too prolonged a period of inquiry. In order to avoid the discontinuity that would appear in the series of employment and unemployment estimates if the entire sample of 25,000 households were replaced in the same month, a proportion of them are replaced each month. In this way the change due to the change in sample is distributed over a period of a number of months. In each area the listings of dwelling units in sample segments are brought up to date at frequent intervals, so that each new sample of dwelling units will reflect any new construction or demolition of existing structures.

SURVEY OPERATION

Each month, during the calendar week in which the 15th falls, a staff of trained enumerators interviews some responsible person in each of the 25,000 households in the sample, obtaining information on the sex, age, and other characteristics of all persons in the household, and the employment status during the week preceding the interview of all persons 14 years of age and over. Supplementary questions are also asked on occasion on such subjects as housing facilities, labor market status at an earlier date, persons attending school and holding jobs, persons holding two or more jobs, and the like.

THE MAKING OF ESTIMATES

The schedules containing the information obtained for each household are received in the Washington office by the end of the week after enumeration. The schedules for households for which no interview could be obtained are replaced by copies of schedules for interviewed households of similar race and residence characteristics. After the raw data are coded and edited, they are transferred to punch cards. A separate card is punched for each person 14 years old and over, each representing about 1,500 similar persons in the civilian noninstitutional population of the United States.

Estimates could be prepared by tabulating these cards with a fixed weight of 1,500 for each. However, the accuracy of the final results is improved by using the estimating procedure described below, which brings the

distribution of the sample population by various characteristics more closely into agreement with that for the entire population of the United States. This procedure comprises two steps.

In the first step, an adjustment of the distribution by color and by urban, rural-nonfarm, and rural-farm residence is made. Independently derived distributions by color and residence are not available on a current basis for the United States, but a comparison of the distribution in the sample areas with that for the United States can be made for the census date. The ratios derived from this comparison are applied to the current sample returns

After this first step has been completed, the sample data are tabulated to obtain preliminary sample totals by age, sex, and veteran status. By appropriate weighting these totals are brought into agreement with corresponding independent current estimates of the population of the United States. These independent current estimates are calculated by adjusting the most recent census data to take account of subsequent aging of the population, deaths, and migration between the United States and other countries. A classification of males according to whether or not they are veterans of World War II, based on current data, is included. After this second step is completed, detailed tabulations are prepared which provide estimates of the employment status of the civilian noninstitutional population of the United States.

PUBLICATION

The more important of the resulting estimates are published by the Bureau of the Census in a series of releases under the title, "Current Population Reports: Monthly Report on the Labor Force" (Series P-57). These reports appear about one month after the period to which the data refer, and are distributed to a large list of users, including government agencies, business organizations, research groups, universities, libraries, and individuals. During times of unusual fluctuations in the employment situation, when rapid release of the findings is particularly important, preliminary estimates are prepared and distributed about two weeks in advance of the final report. Additional data and results of special studies are published from time to time in other reports (Series P-50 and others).

Requests to be placed on the mailing list to receive these publications should be sent to the United States Bureau of the Census, Washington 25, D. C.

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PROMOTION OF BIRTH REGISTRATION AMONG INDIANS

By J. Nixon Hadley, U.S.A.*

RESUMEN

La insuficiencia del registro de nacimi ntos en la Tribu de los Indios Navajos, que habita en el sur oeste de los Estados Unidos, alcanza, por lo menos, al 33 por ciento. La Tribu se halla dispersa en una área de 24,000 millas cuadradas de territorio reservado dentro de una zona semi-desértica con comunicaciones inadecuadas. El pueblo es analfabeto y no hable el inglés. No obstante no haber sido nunca recogidos datos exactos, la información dispondible indica la existencia de un alto coeficiente de natalidad y un alto coeficiente de mortalidad infantil.

El Servicio Indígena y la Oficina Nacional de Estadística Vital de los Estados Unidos cooperan en un programa de promoción del registro de nacimientos dentro de ese grupo de población. El punto principal del programa consiste en la proyección de una película tecnicolor filmada con actores navajos y hablada en lengua navajo. La película muestra las ventajas que el registro de nacimientos ofrece a un grupo de población que no puede enterarse de ellas directamente mediante documentos escritos. En ella se da importancia a la necesidad del registro de nacimientos como medio de identificación y como una fuente de datos estadísticos necesarios para la planificación administrativa; la necesidad de informar sobre los nacimientos a tiempo, cuando todavía se hallan frescos en la memoria del informante; y la utilidad de dar al niño un nombre al nacer, nombre que él conservará durante toda su vida. Este último punto requiere un especial énfasis debido a la costumbre del navajo de usar varios nombres y apodos variables, en lugar de un nombre verdadero y constante.

Cada uno de esos aspectos se reitera varias veces, por medio de incidentes que comprueban las dificultades con que tropieza la persona que no dispone del certificado de nacimiento frente a las facilidades que se le ofrecen al poseedor del certificado. La película se proyecta con gran lentitud teniendo en cuenta que se trata de un auditorio acostumbrado a una pasibidad general y no habituado a ver películas.

En la representación se distribuirá un folleto, ilustrado con fotografías de la película y un texto bilingüe sobre la misma, en inglés y navajo. Tambien se ha propuesto una serie de carteles sobre los principales aspectos, y además se publicarán en los periódicos en idioma navajo, una serie de cuentos sobre motivos cómicos, como una variante del programa. En adición al proyecto educacional, por otra parte, se ha sugerido la instalación de un mayor número de oficinas para facilitar el proceso del registro. El programa aún no ha sido llevado a la práctica. Se estima que se necesitarán tres años para poder medir el grado de éxito, debido al espíritu conservador del navajo frente a la adopción de nuevas ideas.

For several years the problem of under-registration of births and deaths in the Navajo Indian Tribe has been a joint concern of the National Office of Vital Statistics, the United States Indian Service, and the Registrars of Vital Statistics in three States involved in the problem. The Navajo Tribe, approximately 60,000 in 1947, is the largest single Indian Tribe in the United States. It has had the poorest record in registration of births and deaths.

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In 1940 a nation-wide check on birth registration was made in connection with the decennial census. All infants born during a three months' period at the beginning of the calendar year 1940 as reported by census enumerators were checked against available birth certificates. For the counties included in the Navajo area less than one-fourth of the infants listed in the census could be matched to birth certificates on file. This cannot be interpreted as 75 per cent under-registration, since the Indians use more than one name, either simultaneously or in succession, and many listings were unmatched because of changes of name or inability to identify names. In 1944 it was estimated that approximately one-third of all Navajo births were actually unregistered. It is possible that the proportion in 1940 was somewhat higher than this, but less than the three-fourths of births unmatched by registrations.

Several factors are involded in the problem of Navajo under-registration. The Navajo Indian Reservation is one of the most isolated areas within the United States. It is located in the southwestern part of the country, east of the Grand Canyon, and occupies approximately 24,000 square miles of land in Arizona, New Mexico, and Utah. This area of Navajo Reservation land, which is somewhat larger than the entire country of Costa Rica, has only one surfaced highway through the western portion and one other along its eastern boundary, a total of 100 miles. A few miles of graded roads supplement these, but for most of the reservation rough wagon trails, impassable in bad weather, are the only means of communication. A transcontinental railroad barely touches the southeastern corner.

The major part of the area consists of semi-desert grazing lands with a carrying capacity of 520,000 sheep—less than 10 per capita. Only 125 square miles are used for cultivated crops, of which less than a third is dependable irrigated land. Over 2,500 square miles are barren rock. While Costa Rica, to which we compared the reservation in size, supports over 700,000 people, 60,000 Navajos seriously overpopulate this area, even though the density is only 2.5 persons per square mile. It has been estimated that with full development of resources approximately 35,000 Navajos could maintain themselves in moderate circumstances on the reservation.

Since the major dependence, exclusive of wages earned off reservation, is upon sheep, the Navajos are semi-migratory as well as widely dispersed. Twice a year the average Navajo family moves with their sheep from summer to winter grazing lands. Unless the summer grazing lands adjoin their agricultural holdings the family will either divide in summer, part staying with the herd, the remainder with the corn fields, or else the entire family will shift from grazing land to corn fields for occasional cultivation or for harvesting. The problem of keeping records of births and deaths for such a population in an inaccessible territory is tremendous.

The Navajo Tribe has been, and still remains, the most rapidly increasing group in the United States. In 1868 when they first went on reservation they were tallied at approximately 8,000. It is possible that this count may have been low, but even a 25 percent increase would give only 10,000 members of the tribe. In 1910 there were over 20,000 Navajos. By 1940 this had again doubled. The estimated population in 1947, on the basis of ration books issued, is slightly less than 60,000. The estimated birth rate, from sample surveys, is approximately 35 per 1,000 population. Infant mortality rate cannot be accurately determined, but it is admittedly high. Tuberculosis, trachoma, pneumonia and venereal disease are also markedly high.

The Navajos are predominantly illiterate and non-English speaking. In

1930, the last year for which figures are available, 73.5 percent of all Navajos 10 years old and over were illiterate, and 71.0 percent in the same age groups were non-English speaking. For the same year the Census reported 69.8 percent of all Navajo children between the ages of 5 and 20 were not attending school. Conditions have improved little, if any, since then. For the fiscal year 1945 the Commissioner of Indian Affairs reported 65.9 percent of Navajo children between 6 and 18 not in school. The major reason for this continuing non-attendance has been the lack of available school facilities on the reservation, and the dislike the Navajo has for sending his children away from home.

Until the recent war period, nearly all Navajos stayed on the reservation. In 1930 less than two percent of the Navajo population was reported away from the immediate vicinity of the reservation. During the war approximately 3,000 Navajos served in the armed forces of the United States. About 10,000 other Navajos, because of the increasing population density of the reservation, and because of active recruiting programs to relieve the general labor shortage, left the reservation to work as laborers on the railroad, and in mines and lumber camps. For most of these men, this was the first time that any need for personal identification papers became apparent. Almost none of them had birth certificates available. During the war-time labor shortage it was possible, with extra effort, to surmount this difficulty by a certification as to age and nationality from the tribal rolls, but the value of a birth certificate as proof of identity did become evident to many Navajos.

Work off the reservation also demonstrated the value of education. Ten years ago, although school capacity was much less than the number of children of school age, it was difficult to keep schools filled to capacity. Many parents preferred to hold children at home to help herd sheep. In the fall of 1946, schools were enrolled to maximum capacity on the reservation, children were sent to Indian Service Boarding Schools as much as a thousand miles distant from the reservation, and still hundreds were turned away. The need for accurate population data on the Navajo for administrative planning of needed schools and other facilities became acute.

During the winter of 1945-46 a program for the promotion of birth registration among the Navajos was worked out between the United States Indian Service and the National Office of Vital Statistics. It was decided that a special educational program was desirable, and that the major item should be a sound movie with the sound track in the Navajo language. A motion picture crew employed by the Indian Service would be available in the general area to make the picture so that estimated cost would be relatively low. The use of a spoken Navajo narrative would reach a larger proportion of Navajo audience than any other medium.

To supplement the movie a pamphlet was also planned with a bi-lingual text in Navajo and English and illustrated with stills from the movie. Two uses were foreseen for the pamphlet. It could be given to all spectators of the movie as a memory aid for the points carried in greater detail on the sound track. It could also be distributed in those areas where lack of electricity makes it impossible to show the film at present. At a later date it is hoped that a truck equipped with a generator can be obtained. This will make it possible to show the film in all parts of the reservation. A series of posters covering the principal points made in both film and pamphlet would be pre-

pared for display in schools, trading posts, missions, and other centers of Navajo life.

It was also agreed that additional local registrars would be appointed to supplement the Indian Service personnel already working at the task. At the time of the discussions there were 18 local registrars for the Navajo Reservation, with an average area of over 1,500 square miles for each to cover. It is believed that the installation of additional local registrars, selected on grounds of capability and interest in the problem, from among the missionaries, traders and educated Navajos can greatly facilitate the registration process. At present many Navajos must travel 40 or 50 miles by horse if they wish to register a birth or death. Many neglect to do it.

There was unanimous agreement that as much emphasis should be placed on the problem of names as on the process of registration. The Navajo belief is that names have power, and should not be used carelessly. Consequently each man keeps his true name a secret, known only to himself and his nearest relatives. He is known by a nickname—sometimes by several different nicknames, or by relationship terms to some other Navajo. Only a person who knows a particular local group very well indeed can tell an inquirer that "Hastiin Nez" is the same person as "Beeshlhigai Atsidi Badaanii." (The two names cited mean "Tall Man" and "Silversmith's Son-in-law".) Many members of the community may know him by one of these names only, and not recognize him by the other. He may use either indiscriminately in seeking employment, or in setting up credit at the trading post—and may or may not remember in dealing with the government to use still a third name, "John Manygoats," which was arbitrarily given to him on the agency census rolls.

Under these circumstances the identification of any specific individual becomes a tremendous task. One effort to clarify the situation was made by the Navajo Agency when they issued a metal tag to each Navajo bearing his census roll number for identification purposes. This has been only partially successful. An illiterate family keeping all tags together confuse one with another, or even blithely substitute one picked up on the road for one that has been lost. It has been a frequent experience upon checking a census number presented by a 35-year-old male to discover the number was originally issued to an 80-year-old female. Usually such a check is only possible hours afterwards, and miles away, so that identification is impossible. It therefore seemed imperative that all material prepared stress the need for naming the baby at birth and retaining the same name throughout life as an integral part of the registration procedure. A revision of the census number tag was also agreed upon. Identification tag printers were obtained as war surplus from the U. S. Navy which would inscribe on the metal disc the name, sex and date of birth of the individual as well as the census number. These additional data, while no insurance against exchange of tags, allow for immediate check of obvious errors.

It was also agreed that at the time the registration program was ready for launching, the reservation superintendent would present it to the Tribal Council. Sponsorship by the Tribal Council carries much greater weight with the tribe than sponsorship by any outside agency.

Work on the film commenced in September 1946. All actors were members of the tribe or local whites. The motion picture was shot on 16 mm technicolor film with a silent camera, but at sound speed so that it could later

be synchronized with a sound track. Approximately one month was spent in shooting the scenes after the script was written and approved. Editing and cutting took about six weeks. These processes were slowed down by the extra difficulty of matching scenes, since amateur actors were used who could not be counted on repeating gestures exactly the same in a close-up as in a medium shot. The timing of scenes to match the spoken narrative was more difficult than usual since the language of the narrative was unfamiliar to the editor.

The film was intentionally paced very slow, and made very repetitive. It was prepared for an audience whose normal tempo is, in general, more leisurely than that of the usual cinema audience; who are completely unfamiliar with the technique of the motion picture, and to whom the concept of birth registration is entirely new. Under these circumstances it seemed advisable to develop each scene slowly, and to repeat the principal points to be made—give your baby a name that will not change, and go to see the registrar as soon as the baby is born—at least four times in the course of the 23-minute film. Another slight innovation for an illiterate audience was to substitute a spoken introductory narrative for the usual background music during the showing of the title and film credits.

The picture opens with a statement of the change in Navajo life: "Once there were few Navajos. They lived by themselves on the reservation. They grazed their sheep on reservation land. In wet places in the bottoms of canyons they farmed a little. The things one family did not have they traded for with other Navajos. Nowadays things are different. There are many Navajos. People have to work hard just to make a bare living. Many Navajos leave the reservation to work for the railroad as section hands, or on logging crews, or in town. When they are away from home they need papers to show what their names are, what people they come from, where they were born, and how old they are.

FIGURE 1
As soon as your baby is born, give him a right name that he will keep all through life

The scenes which accompany these thoughts illustrate Navajo life on and off the reservation. The film then cuts back to a new-born baby with the comment that as soon as a baby is born the relatives should choose a name for it which it will keep all through life, a name that all people will know it by. The narrative continues with the statement that if the baby is born at home (and only one out of four Navajo babies is born in a hospital) one of the relatives should tell the registrar about it. No word existed in Navajo for registrar, so the phrase used is "the man who makes baby papers." It is pointed out that "the man who makes baby papers" will want to know just what day the baby is born, an easy question to answer if reported soon after birth, but a hard thing to remember if delayed. It is mentioned that he will ask the names of the parents, and the name of the child, again with the stress that this should be the name the child will retain all through life.

The film then goes into the use of the birth certificate as an identification. It points out the greater ease in entering school, and in collecting pensions, soldier's benefits, and insurance when a birth certificate is available to identify an individual and show his relationship to his parents. In each instance contrasting scenes are shown. One Navajo has a difficult time without a certificate. Another, with a certificate, has an easier time.

Discussion of the use of birth certificates in administrative planning is put on a simple level. Only if a birth certificate is made for each baby that is born can there be an accurate count of the population. Without accurate population counts no one knows how many wells are needed to provide water for all Navajos, no one knows how many hospitals, doctors, and nurses are needed, or how many schools are needed. Wording of this section of the narrative took more time than any other part. It was necessary to avoid complication which would have made the message unintelligible, and at the

FIGURE 2
Go to see the registrar. Tell him the baby's right name, when he was born, and the names of the parents

FIGURE 3

He can get a copy of his baby paper any time he needs it, even after he is an old man

same time to avoid any implication that accurate population counts would automatically assure the provision of such facilities. The key phrase finally used was that the possession of accurate population figures through birth registration would enable the Navajo tribe to ask Congress to provide such facilities.

The Navajos are extremely afraid of the dead. The Navajo funeral takes place as soon as possible after death, and consists of elaborate ceremonies to break all ties between the living and the dead. Thereafter the deceased is never mentioned again, and the place of death and place of burial are avoided. The entire subject of death, even abstractly, is unpleasant. The problem of death registration was consequently given only a very summary treatment in the Navajo film, with a fairly brief mention that it aided in health work, and assisted in cleaning up estates so that man's farming and grazing lands would go to his children. In an attempt to capitalize on existing superstition it was also pointed out that submission of a death certificate was necessary if the tie between the living and dead was to be broken in the records.

After the brief detour into death registration the points on birth registration were made over again in summation. The baby should have a name that he would keep all through life. As soon as the baby is born, one should tell the registrar. The registrar would want to know the name of the baby, the date of birth, and the names of the parents. This would make the baby's life easier.

The pamphlet, as has been indicated, is illustrated with scenes from the film. Four of the illustrations accompany this article. The same

FIGURE 4

Of course you love your baby. Make his life easy by getting him his baby paper and giving him a right name

points are made in the pamphlet as in the film, but necessarily in a briefer manner. Sixteen photographs, each with only one short text, can cover only the major points made in the longer cinema presentation. Even here, though repetition is used to bring out the major points.

No work has as yet been done on a proposed poster series, which will repeat the arguments for birth registration made in the pamphlet, but use native drawings rather than photographs as illustrations.

A series of stories have been prepared to be run in the Navajo language newspaper. These are humorous in tone and patterned after stories in the Navajo mythology of their trickster hero, Coyote. Each makes a point in connection with the birth registration campaign. The first, "Why Old Man Coyote's Children Didn't Go to School," points out that estimating the size of the school population, and the number of schoolrooms needed in the future, is dependent on birth registration. Other tales make similar points.

At the time of this writing the Navajo Registration Program is just reaching the end of the preparation stage. Any estimate of the success of the program will have to wait until time has been allowed for it to have an effect. For most groups, a measure at the end of the first year of active promotion would probably be adequate, but previous experience indicates that the Navajo move very slowly in adopting new ideas. Three years at least should be allowed before any conclusive judgments are drawn as to the effectiveness of the program.

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PUNTOS DE VISTA NACIONALES SOBRE LOS PROBLEMAS DE SUMINISTRO DE INFORMACIONES ESTADISTICAS A LAS ORGANIZACIONES INTERNACIONALES[1]

PARTE I, RECAPITULACION[2]

Antecedentes

Durante los tres o cuatro últimos años, el IASI se ha esforzado por estimular la idea y las sugestiones nacionales sobre los problemas del intercambio de información y datos estadísticos, especialmente desde el punto de vista de la responsabilidad que atañe a las agencias nacionales. Algunos de estos estímulos ya han producido sus frutos, por medio de la creación en varios países de oficinas especialmente destinadas a hacer frente a los problemas que envuelve el suministro de información estadística a los organismos internacionales.

La Primera Sesión del Instituto Interamericano de Estadística viene a ofrecer una ocasión propicia para examinar las ideas sobre este asunto y conocer los pasos que han sido dados y que se han propuesto, en los distintos países, para afrontar el problema. Por esta razón, se proyectó una discusión de mesa redonda como una parte del programa de esta Sesión, y se pidió un breve informe a cada director nacional de estadística sobre su visión del problema y su solución. A la carta de invitación a participar en esta encuesta, se unió una relación de aspectos, como sugerencias para ser consideradas, con objeto de conducir la discusión de mesa redonda a lo específico más que a lo general. Se creyó que al margen de esta reunión nacerían sugerencias útiles respecto a los caminos y procedimientos a seguir, mediante los cuales el trabajo estadístico de las naciones y el de los organismos internacionales podría ser, para unos y otros, más adecuado y más efectivo, con un costo mínimo.

El problema, y una propuesta de solución[3]

El volumen y complejidad de las solicitudes de estadísticas para los organismos internacionales plantea un problema, constantemente creciente, a las agencias oficiales que producen estadísticas en el campo nacional.

Hace algún tiempo, el IASI propuso, como una solución parcial a este problema, la creación en cada país de un "Punto Focal Nacional para Esta-

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[1] Extractos del documento del programa de la Primera Sesión del Instituto Interamericano de Estadística, reunida en Wáshington, D. C. en septiembre de 1947. El texto inglés aparecerá en el tomo correspondiente al Instituto Interamericano de Estadística, de la serie de volúmenes titulados *Actas de las Conferencias Estadísticas Internacionales*, Wáshington, D. C., Septiembre 6-18, 1947.

[2] La parte II, "Recopilación de Comentarios de los Directores Generales de la Estadística Nacional," aparecerá en el volumen mencionado en la nota 1.

[3] Véase "Concepto de Un Punto Focal Nacional para Estadísticas Internacionales," por Halbert L. Dunn, presentado como material básico para esta mesa redonda. Se publicó en *Estadística* No. 16, septiembre de 1947.

dísticas Internacionales," a través del cual deberían ser dirigidas las solicitudes y respuestas estadísticas. Varias naciones ya han dado pasos para establecer tal oficina. (Ejemplos: Argentina, Brasil, Chile, República Dominicana, Guatemala, México, Panamá, Perú, Estados Unidos).

Las obligaciones primarias de un Punto Focal Nacional consisten en conseguir que las solicitudes internacionales sean dirigidas al lugar adecuado dentro del país, y que las respuestas devueltas sean puntuales, adecuadas y consecuentes. Otros servicios y deberes son: El establecimiento de una recopilación de referencias de publicaciones internacionales relativas a datos, normas, metodología, etc.; la promoción, dentro del país, de normas estadísticas internacionalmente aprobadas; el acuerdo con las agencias internacionales sobre asuntos estadísticos, en cuanto a la colaboración técnica adecuada.

En muchos países, el lugar más lógico para el establecimiento de tal oficina es la Dirección General de Estadística, la cual edita el anuario nacional. Un requisito básico es, desde luego, el empleo de personal competente técnicamente preparado, y protegido contra los reemplazos debidos a cambios políticos.

Resumen de las respuestas

Se recibieron informes de 14 países—Argentina, Bolivia, Brasil, Canadá, Colombia, Costa Rica, Cuba, El Salvador, Estados Unidos, México, Paraguay, Perú, República Dominicana y Venezuela. Estas respuestas han sido reproducidas textualmente en la parte II del presente documento. En los casos en que se indicaba en la respuesta, al comienzo de cada informe se anota el grado de autoridad con que viene la misma (i.e., bien en calidad de respuesta personal o bien con el respaldo del Gobierno). La "Relación de consideraciones sugeridas" no fue ideada con miras a obtener respuestas tabuladas a manera de un cuestionario; sin embargo, la mayoría de las respuestas se redactaron de acuerdo con ese esqueleto, y consecuentemente se ha considerado deseable seguir el mismo esquema en el sumario que a continuación se presenta.

1. *Cuál sería la actitud de los organismos estadísticos nacionales frente a: (a) La diligencia de cuestionarios extensos? (b) Duplicación de pedidos de diferentes organizaciones internacionales? (c) Pedidos de datos no publicados? (d) Solicitud de la aprobación oficial de los datos pedidos por las organizaciones internacionales? (e) La necesidad de calificar los datos en cuanto a sus limitaciones y defectos?*

Ningún país expresa renuencia para procurar llenar cuestionarios extensos cuando sea necesario. Brasil y Canadá piden que se empleen cuestionarios tan cortos como sea posible.

La mayoría de las respuestas (Argentina, Brasil, Canadá, Colombia, Cuba, El Salvador, República Dominicana), consideran que la duplicación y combinación de cuestionarios de diferentes organizaciones internacionales plantea un serio problema a las agencias nacionales de estadística, y que se necesita tomar medidas para corregir esta situación. Este punto no fué considerado por seis países.

Una mayoría de los informantes consideran que debería darse la aprobación técnica oficial de los datos nacionales, con anterioridad a su uso por parte de los organismos internacionales, pero cree que esta aprobación debería ser una función de la agencia nacional responsable de las estadísticas,

o de la oficina del Punto Focal Nacional. Este punto no fué considerado por cinco países (Bolivia, Estados Unidos, México, Paraguay y Venezuela).

Solamente seis países (Argentina, Brasil, Canadá, Colombia, El Salvador y Perú) consideraron el tema de la calificación de los datos en cuanto a sus defectos y limitaciones. Todos ellos coincidieron en que deberían ser dadas tales calificaciones.

2. *Deberían exigir los países una coordinación de las organizaciones internacionales, con respecto a las informaciones de tipo similar que soliciten, como requisito previo para responder a los cuestionarios que éstas envían, ya se refieran a datos estadísticos, metodología o a otra clase de información?*

Si bien los nueve informantes que se ocupan de esta pregunta estiman que tal coordinación es necesaria y deseable, tres (Canadá, Colombia y Cuba) decidieron ir tan lejos como para decir que ello debería ser un prerrequisito para el suministro de tales respuestas.

3. *Qué problemas nacionales se presentan para el establecimiento de un sistema de consulta e intercambio estadístico entre las diferentes oficinas estadísticas del país? Se relacionan estos problemas con cuestiones de autoridad u organización administrativa, que impiden la coordinación de las actividades estadísticas nacionales? Existen otros problemas?*

De acuerdo con alrededor de la mitad de las respuestas, tales problemas no existen en sus países. De acuerdo con los otros informantes, los problemas están latentes, originándose en varias causas, pero la opinión es que debería afrontarlos una oficina del punto focal convenientemente organizada.

4. *Es el concepto del "punto focal nacional" la solución de dicho problema? Si lo es, en qué organismo debería ser establecido y en qué forma quedarían representadas las demás oficinas? Si no lo es, qué otra solución sugeriría usted?*

Hay acuerdo unánime en cuanto a que el "Punto Focal Nacional" es necesario. Muchos de los informantes consideran que él debería estar en la Dirección General de Estadística, porque aquí es donde la ley ha localizado la coordinación de las estadísticas nacionales, y donde se prepara el anuario estadístico nacional.

5. *Qué servicios y facilidades deberían conceder, a se vez, las organizaciones internacionales a los organismos estadísticos nacionales que proporcionan los datos? Deberían ser recíprocas? Deberían participar los países en el planeamiento de los cuestionarios y en los estudios de investigación? Si lo estima así, en qué forma y cómo podría procederse? Es el punto focal nacional parte integrante de un sistema internacional de intercambio estadístico?*

En general, los informantes consideran que la tarea de relacionar sus oficinas con las organizaciones internacionales de estadística debe seguir dos direcciones; i.e., que hay ciertas consideraciones y servicios que deben ser dados por las organizaciones internacionales para compensar el aumento de servicios que se solicita a las naciones.

Seis informantes (Argentina, Brasil, Canadá, Colombia, El Salvador y México) expresan la opinión de que definitivamente debería existir la participación nacional en la revisión de cuestionarios y prospectación de investigaciones.

La mayoría considera que las publicaciones internacionales de naturaleza estadística deberían proporcionarse a las naciones en cantidad suficiente para satisfacer sus necesidades; igualmente, que la información sobre métodos y normas estadísticas internacionales debería disponerse gratuitamente.

La República Dominicana expresa la opinión de que debería ser accesible a las Direcciones Generales de Estadística la ayuda y la orientación técnicas

sobre consultas básicas, y que deberían ofrecerse becas de enseñanza práctica por parte de los organismos internacionales de estadística. Siete países (Argentina, Brasil, Canadá, Colombia, Costa Rica, Cuba y El Salvador) opinan que el Punto Focal Nacional debería considerarse como una parte integral o coordinada de un sistema internacional para el intercambio de datos e información.

6. *La reproducción de informaciones estadísticas proporcionadas por un país, de interés o valor para más de una organización internacional, debe ser de responsabilidad de: (a) El país; (b) la organización internacional a la cual se le proporcionan los datos; (c) una oficina central de estadística de las Naciones Unidas?*

Mientras que ocho informantes (Argentina, Bolivia, Brasil, Canadá, Costa Rica, El Salvador, Perú y República Dominicana) se inclinan porque la reproducción de tales datos debería ser función de una organización internacional, dos (Canadá y la República Dominicana) especifican qué organización internacional es más apropiada para asumir esta responsabilidad. La organización señalada por ambos países es la Oficina Estadística de las Naciones Unidas.

Conclusiones y recomendaciones, para ser sometidas a discusión

El vasto tema del intercambio de información estadística presenta en lugar de uno, dos aspectos. La solución del aspecto exterior o internacional depende del grado de coordinación que pueda alcanzarse por los mismos organismos internacionales. La solución del aspecto interno o nacional depende del grado de coordinación alcanzada entre las agencias nacionales de estadística.

Del examen de las respuestas, surgen las siguientes conclusiones y recomendaciones para ser sometidas a discusión:

1. Desde el punto de vista de los intereses y recursos nacionales, es urgente que los organismos internacionales convengan arreglos para coordinar las solicitudes que ellos hacen sobre una misma clase de información. Esto requiere que los organismos internacionales tomen una pronta medida para intercambiarse la información estadística recibida por cada uno de ellos.

2. Se recomienda el uso de cuestionarios o formularios breves, siempre que ello sea posible. Sería preferible establecer un formulario mínimo, general y obligatorio. Más allá del formulario mínimo requerido, la extensión de la información a proporcionar debería dejarse al juicio de la agencia nacional responsable.

3. La reproducción y distribución de informaciones estadísticas nacionales de interés o valor para más de un organismo internacional deberían estar, más que al cuidado de la nación informante, a cargo del organismo internacional al cual se envían aquéllas.

4. Se recomienda la creación de un "Punto Focal Nacional para Estadísticas Internacionales," de acuerdo con los lineamientos ya dictados por el IASI. La localización lógica para el establecimiento de tal servicio es la Dirección General de Estadística que publica el anuario nacional de estadística y se halla en condiciones de dar representación a la agencia suministradora de los datos básicos.

5. Un requisito esencial para la solución del problema del suministro de información estadística, es la provisión de fondos por parte de los Gobiernos, para proporcionar al "Punto Focal Nacional" personal con adecuada preparación, equipo, y otras facilidades.

6. Se reconoce el sistema de los Consejos Nacionales de Estadística como el mejor mecanismo para obtener la coordinación de los intereses estadísticos nacionales. Consejos de este tipo existen actualmente en un grupo de países.

7. Se recomienda la adopción de medidas para una enseñanza práctica más adecuada del personal estadístico.

8. La condición de "estadístico" debe ser establecida como una carrera pública.

9. El intercambio de información debe ser recíproco. A los organismos internacionales les corresponde proporcionar al Punto Focal Nacional, para la distribución a aquellas agencias estadísticas de dentro del país que lo necesiten:

a. Publicaciones estadísticas internacionales en cantidades suficientes para atender las necesidades de las agencias gubernamentales.

b. Información respecto a los procedimientos y metodología recomendados para la recolección y concentración de datos (i.e., normas internacionales recomendadas), en suficiente cantidad para atender las necesidades de las agencias gubernamentales.

c. Cualquier otra información relativa a actividades estadísticas de interés o valor para las agencias estadísticas nacionales.

10. Convendría conceder participación a los países en los trabajos de proyección de los cuestionarios e investigaciones. Esto, probablemente, adoptaría la forma de una revisión nacional, con preferencia, mediante un ensayo en varias países con anterioridad al empleo mundial.

11. Los datos deben ser calificados en cuanto a sus limitaciones y defectos, cuando el país sea requerido para hacerlo. En tal caso, se especificará claramente el nombre de la agencia que haga las calificaciones.

12. La solicitud de datos no publicados debería restringirse a los casos de una necesidad específica y justificada. Las naciones deberían organizar sus servicios de tal manera que fuese posible el suministro de datos no publicados cuando se necesiten.

13. El organismo internacional que haga uso de los datos deberá indicar en los documentos que publique, cualquier cambio introducido en las estadísticas suministradas por el país, o, si es posible, antes de su empleo deberá verificar dichas modificaciones con el país.

14. Los países otorgarían buena acogida a consultores técnicos sobre el desarrollo de los servicios estadísticos y del Punto Focal Nacional.

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RESOLUTIONS OF THE FIRST SESSION OF THE INTER AMERICAN STATISTICAL INSTITUTE (IASI) WASHINGTON, D. C., SEPTEMBER 6-18, 1947*

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* The Spanish text of the resolutions was published in *Estadística* No. 17.

† The IASI as a standard practice defines "session" to mean a group of individual "meetings." These two terms in the draft resolutions of the Committee on the 1950 Census were used in an exactly reverse sense. To conform to IASI practice and avoid confusion in interpretation, the terms have been edited by the Permanent Office to make them consistent with the other resolutions of the First Session of the IASI.

‡ At this meeting the voting privilege was extended to *all* participants, whether or not members of the IASI.

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38 Financing the IASI (permanent quota).
39 Financing the Committee on the 1950 Census of the Americas (special quota).
40 Invitation to hold the Second Session of the IASI in Bogota.

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1. COORDINATING BOARD OF THE COMMITTEE ON THE 1950 CENSUS OF THE AMERICAS

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That the Inter American Statistical Institute, in accordance with a resolution passed by the First Inter-American Demographic Congress, meeting in Mexico City in 1943, has assumed responsibility for preparatory work for the taking of a general census of population in the countries of the American Continent in 1950, in accordance with basic minimum standards, approved by the participating countries;

That, as one of the measures necessary to accomplish this purpose, the Committee on the 1950 Census of the Americas has been established by the Institute, with representation from the census agencies of the American nations, and has held its first session in the city of Washington, D. C., September 2-8, and 16, 1947;

That for technical reasons it is advisable that there be established a co-ordinating and consulting agency, composed of the officers of the Committee appointed by the Institute and delegates elected by the Committee,

RESOLVES:

1. To establish the Coordinating Board of the Committee on the 1950 Census of the Americas composed of 10 members, as follows: The active chairman, the honorary chairman, and the secretary, appointed by the Inter American Statistical Institute; six members elected by the Committee taking into account in so far as possible geographic distribution, regional differences, and census experience. The secretary general of the Inter American Statistical Institute will be an ex officio member of the Board.

2. The duties of the Coordinating Board are:

a. To represent the Committee on the 1950 Census of the Americas during its recesses, without prejudice to the exercise by the chairman of the administrative functions appropriate to his office; and to adopt such measures as may be necessary to carry out the special resolutions of the Committee. During recesses of the Board, the chairman will consult with its members on the adoption of general measures not included in the resolutions of the Committee. In case it is necessary to take immediate steps of a general character, the chairman will take the appropriate action with the advice of the secretary.

b. To study general or specific technical matters which may be referred to it by national or international agencies.

c. To foster, in collaboration with national or international agencies, such measures as may be necessary for the efficient preparation for and execution of the 1950 Census of the Americas.

d. To meet at least once a year in one of the American capital cities before the next meeting of the Committee.

e. To inform participating nations concerning the measures which the Board has adopted or advanced in exercising the authorities given it under "a" and "c," above.

f. To perform such other duties as may be assigned to it by the Census Committee, in other resolutions.

3. In case an elected member vacates or ceases to be active in his position on the Board, the members of the Committee shall, on proposal of the Board, elect by mail vote a substitute from among three candidates representing different countries.

2. MINIMUM INTER-AMERICAN POPULATION CENSUS PROGRAM

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That one of the fundamental purposes of its first session has been the adoption of uniform questions and definitions for the schedules or questionnaires, and of methods and procedures for the Census of the Americas which will permit comparison of the results;

That to this end the representatives of the 22 American nations, after studying the available working papers, have presented their technical opinions and their experiences;

That the Committee has reached an agreement on some of the questions for the minimum inter-American population census program, but considers it necessary that the Coordinating Board carry out supplementary studies as to the possibility and form of including other items in this minimum program, set up standard definitions, and draw up a uniform plan for the tabulation of results,

RESOLVES:

I. To adopt as a "Minimum Inter-American Population Census Program," in addition to the usual questions on name, address, etc., the following items:

1. Relationship to head of household.*
2. Sex.
3. Age.† (Age at last birthday. For children of less than one year, in months.)
4. Marital status.*
5. Place of birth. (For the native born, the principal territorial subdivision of the country will be indicated, such as State, Department, or Province. For the foreign born, the country of birth which they report.)
6. Naturalization. (For the foreign born, it should be indicated, whether or not the individual is naturalized in the country where the census is being taken.)
7. Literacy. (Does the person know how to read and write? Yes or no.)
8. Educational level.*
9. Mother tongue.*
10. Gainfully occupied population:
    a. Individual occupation.*
    b. Branch of economic activity (industry).*
    c. Class of worker.*

II. To submit to the Coordinating Board of the Committee on the 1950 Census of the Americas, for study, taking into account the opinions expressed during debate, the reports drawn up by the special subcommittees, and technical consultations with representatives of national and international agencies, the following:

1. Definitions and standards of classification of items included in the minimum program:
    a. Relationship to head of household ("census family").
    b. Marital status.
    c. Educational level.
    d. Mother tongue
    e. Gainfully occupied population.
2. The possibility of including in the minimum program the following items:
    a. Nationality.
    b. Income from wages and salaries.
    c. Fertility.
    d. Cultural characteristics (for regional use).
    e. Data on housing for possible inclusion in the population census schedule.
    f. Urban and rural population (especially definition of "place").
    g. Population economically dependent on agriculture.

III. To receive, in its next session, the report of the Coordinating Board on the matters

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* Subject to study and definition by the Coordinating Board of the Committee on the 1950 Census of the Americas.

† Minimum tabulation of age by sex according to the following age groups: Less than 1 year; 1-4 years; 5-9 years; and so forth, in 5-year groups up to 84 years; and 85 years and older.

listed above, in order that its conclusions may serve as a basis for definite adoption of a "Minimum Inter-American Population Census Program."

IV. To make the following specific recommendations to the American nations:

1. That it would be desirable to obtain figures for the total "de facto" population and that, in those countries in which, according to law, "de jure" censuses are taken, the necessary measures should be taken, if possible, to obtain at least the total "de facto" population.

2. That the enumeration of the population be completed in the shortest possible time, preferably within a single day, and, if possible, in not more than a week in rural areas, with the enumeration relating to a specific time on the date selected as the "census day."

3. That the American nations give preference to the "canvasser" method, in taking the 1950 Census of the Americas, without prejudice to use of the "householder" system in those cases in which the latter may be considered desirable.

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3. AGRICULTURAL CENSUS OF 1950

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That the Agricultural Census Subcommittee, composed of specially designated representatives from each delegation, with participation of staff members of the Food and Agriculture Committee of the United Nations (FAO), has studied the projects and other preparatory documents relating to the taking of an agricultural census in the American nations in 1950;

That as a result of its work, this Subcommittee has presented a report in which, besides suggesting definite changes in the census schedule prepared by the FAO, it urges the Committee to recommend to the countries of this hemisphere the adoption of specific legal or administrative measures which would contribute to the most effective preparation and execution of the agricultural census in co-ordination with the 1950 Population Census of the Americas,

RESOLVES:

1. To approve the report of the Agricultural Subcommittee.

2. To suggest that the secretary general of the Inter American Statistical Institute distribute the text of this report to the offices which are in charge of the preparation and conduct of this census in each American country.

3. To express its satisfaction with the manner in which the Food and Agriculture Organization of the United Nations in co-ordinating its technical work with that of the Inter American Statistical Institute and of this Committee, in regard to the preparations for the 1950 population and agricultural censuses in the countries of this hemisphere.

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4. ECONOMIC CENSUSES OF 1949-1951

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That the Committee approved the proposal of the Mexican delegation that all American countries in a position to do so be urged to take, between 1949 and 1951, in addition to censuses of agriculture and population, other economic censuses (of industry, commerce, transport, etc.), the results of which would furnish the statistical data necessary for organizing continental economic co-operation,

RESOLVES:

1. To recommend that each American nation take, between 1949 and 1951, other economic censuses in addition to those of population, housing, and agriculture.

2. To recommend that the nations planning to take such economic censuses follow the minimum standards to be agreed on in the next session of this Committee, for which purpose they are asked to send to the Inter American Statistical Institute their respective plans, for interchange and study.

3. To recommend that, through the economic censuses, statistics be obtained which,

among other uses, will permit the calculation or estimation or national income in those countries which lack such studies.

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5. CENSUS LEGISLATION AND ORGANIZATION

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947.

CONSIDERING:

That in the course of the Committee deliberations, several delegates have expressed their opinion concerning the desirability of adoption by the American nations of legislative or administrative measures which would aid in the adequate preparation for and conduct of censuses, and the publication of census data,

RECOMMENDS TO THE GOVERNMENTS OF THE AMERICAN NATIONS:

1. That a permanent census office be established or maintained in each country, either as an independent agency or as a part of the national central statistical office.
2. That every effort be made to insure that the directive personnel at all levels in census and statistical offices be technically trained; and that the auxiliary personnel be selected on a basis of qualifications to carry out the work assigned to it. Security of tenure and adequate remuneration must be assured to such personnel in order to obtain individuals of specialized training and outstanding professional standards.
3. That population censuses be taken decennially, preferably in years ending in zero; and that agricultural and other economic censuses be taken at similar intervals if it is not possible to take them quinquenially.
4. That obligatory collaboration of government agencies and semi-public institutions be established, and also the civic co-operation of the population, in the preparation for and taking of the censuses.
5. That the strictly confidential nature of personal statements made for census purposes be guaranteed.
6. That there be established a fixed interval of time, not longer than two years from the date of enumeration, during which the general results of the censuses must be published.
7. That, in those countries where it is possible, sufficient funds be provided annually for the maintenance of permanent census offices; and that adequate appropriations be made for the periodic census work, from the preparatory stage through the publication of the statistical results.

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6. CARTOGRAPHY FOR CENSUS PURPOSES

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That adequate and timely cartographic materials constitute one of the fundamental bases for the success of the 1950 Census of the Americas;

That, recognizing the importance of cartography for census purposes, the Inter American Statistical Institute with the collaboration of various national and international bodies sponsored, in 1946-47, a study of the cartographic situation in Latin America conducted by Professor Jorge Zarur, who made a special study of the map collections, and made a trip through all Latin American nations except Paraguay, giving technical recommendations of a national and international nature, which are included in his report prepared for the first session of this Committee,

RESOLVES:

1. To express its thanks to the following organizations: The Inter American Statistical Institute; the Pan American Institute of Geography and History, Commission on Cartography; the State Department of the United States of America; Office of Inter-American Affairs; and the Brazilian Institute of Geography and Statistics, all of which sponsored the study of the cartographic situation for census purposes in Latin America undertaken by Professor Jorge Zarur, to whom the Committee also expresses its appreciation.
2. To request the Inter American Statistical Institute to send the text of this report to the General Bureaus of Statistics, to the Geographic Institutes, and to the Cartographic Offices of the American nations for their information.

3. To recommend to the American nations which have not yet done so that they adopt, progressively, the suggestions of an inter-American character contained in part III of the report referred to above, among others:

a. That each nation should communicate with the Inter American Statistical Institute and the Pan American Institute of Geography and History concerning its cartographic problems.

b. That in each General Bureau of Statistics or census organization a special section be established, charged with the preparation of cartographic information on the national territory for census purposes.

c. That close co-operation be promoted between the various offices charged with cartographic work and the statistical and census organizations.

d. That a "register" of its entire territory by localities be initiated in each country.

e. That legal measures be taken to "freeze" the internal territorial limits of each country a year prior to the 1950 Census of the Americas.

f. That the Inter American Statistical Institute, in co-operation with the appropriate agencies, sponsor a plan for training personnel in geographic and cartographic matters, as well as for the exchange of specialists.

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7. PLANS FOR CENSUS TABULATIONS

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

The close relationship between the structure of the census questionnaire, the definitions of items, and the procedures of collection on the one hand, and the plans of tabulation, on the other hand,

RESOLVES:

To recommend to the Bureaus of Statistics and to the Census Offices of the American nations the synchronization of their studies relative to census questionnaires, definitions, and methods, with the plans for the tabulation of census statistical data, in such a way that adequate reports may be available for the second session of the Committee.

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8. GUIDE TO CENSUS METHODS

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That the significance and usefulness of censuses depend on their technical quality, on the timeliness and manner of publication of the results, and on the knowledge of the characteristics of the social and economic phenomena which are investigated by means of the census operations,

RESOLVES:

1. To recommend to the Coordinating Board that it take such action as may be necessary so that the census standards which are developed progressively by the Committee will, by their systematic treatment, provide the material for a Guide to Inter-American Census Methodology.

2. To recommend to the Inter American Statistical Institute the initiation of studies leading to the publication of a Methodological Guide for the interpretation of statistical data obtained from censuses, so that the Committee can study the general plan of such a Guide at its second session.

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9. RELATIONS WITH THE UNITED NATIONS

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That during its first session the Committee has received from the secretary general of the United Nations and has considered at this first session the resolutions passed by the

Economic and Social Council at its first session relative to international census plans, as well as reports of the first and second sessions of the Population Commission and the Statistical Commission on this subject,

RESOLVES:

1. To express its appreciation to the Economic and Social Council and to the Population and Statistical Commissions of the United Nations for their interest in and support of the 1950 Census of the Americas.

2. To direct the chairman of this Committee:

a. To transmit to the secretary general of the United Nations copies of the resolutions and other documents of this Committee, as well as other pertinent materials relating to the 1950 Census of the Americas; and to keep him informed as to the future development of the program.

b. To call the attention of the secretary general of the United Nations to the report on geography and cartography for Latin American census purposes, presented to the Committee at its first session, which shows the need to develop and co-ordinate cartographic activities throughout the Americas, in order to provide an adequate basis for census and other statistical purposes; and to suggest that any aid in this matter from the United Nations will be highly appreciated.

3. To request the secretary general of the United Nations to keep the chairman of this Committee informed regarding standards and recommendations relative to census plans on the part of the Economic and Social Council and its commissions, so that these may be taken into account in future deliberations of this Committee.

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10. FINANCIAL RESOURCES OF THE COMMITTEE

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That in the course of these deliberations, it has been manifest, again and again, that the Inter American Statistical Institute must have at its disposal the necessary funds to cover essential expenses of preparatory steps in connection with the Census of the Americas;

That these opinions have been made concrete in two proposals for resolutions, one presented jointly by the delegations from Guatemala, Bolivia, and Peru, and the other by the delegation from Brazil;

That it is the responsibility of the Committee to present this matter to the Inter American Statistical Institute,

RESOLVES:

To call to the attention of the Inter American Statistical Institute the urgency of proceeding to obtain funds to cover the expenses which must necessarily be incurred by the Committee in carrying forward its work of co-ordinating the national censuses of the American nations.

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11. SECOND SESSION OF THE COMMITTEE, AND REGIONAL CENSUS INSTITUTES

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That at this session resolutions and recommendations have been approved involving studies and work to be carried out in the next 12 months simultaneously with preparatory work for the national census in each country;

That the majority of the questions which have been selected for study must be solved as quickly as possible in order to proceed with the consideration of others which can be properly dealt with only in the year preceding the census, since they are dependent on the results of trial censuses and on the exchange of ideas among directors of the censuses in the various countries, at other sessions of the Committee;

That, similarly, it is necessary to prepare plans for the training of the technical personnel needed in the census work,

RESOLVES:

1. To authorize the Coordinating Board, after due consultation, and with the approval of the Inter American Statistical Institute, to call the second session of the Committee during the first six months of 1948, announcing at least 90 days before the meeting the place, agenda, and rules of procedure.

2. Similarly, to authorize the Board to undertake the necessary negotiations so that during the second six months of 1948, there may be in operation as large a number as possible of Regional Census Institutes, in which the directive personnel in charge of the 1950 Census of the Americas may receive professional training.

3. In the light of the reports and preparatory studies of the Coordinating Board, the Committee will, in its second session, determine the locations of these Regional Institutes, and will approve their budgets and study programs including those for trial censuses and other practical experimental work.

4. Notwithstanding the provisions of paragraphs 2 and 3, if the Board finds, as a result of consultation and preparatory work, that the operation of one or more of the Regional Institutes is technically and financially possible, it may determine the location(s), and the date(s) of meeting prior to the time indicated in paragraph 2.

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12. CO-OPERATIVE TECHNICAL STATISTICAL PROGRAM OF THE UNITED STATES

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That the training of competent personnel and the providing of technical consultation are fundamental factors for carrying out satisfactorily the 1950 Census of the Americas, which constitutes the primary responsibility of this Committee;

That the Government of the United States has developed, in several of its agencies, technical training courses for the preparation of personnel of the American republics and, parallel with this, has developed a co-ordinated program of technical advisory services, under which consultants are sent to the various countries;

That outstanding in this program—and of great interest to the Committee—are the training courses and consultation services in connection with specialized statistical fields, and in particular those so well carried out by the agencies responsible for the census, vital statistics, labor statistics, agricultural statistics, and national income;

That the continuation and intensification of this program would constitute a very effective aid in the attainment of the aims of this Committee,

RESOLVES:

1. To thank the Government of the United States in particular, and the different agencies in general, for the cultural contacts, training, and technical consultation which have been realized through the program of inter-American co-operation.

2. To express its desire that this program of co-operation be maintained and, in so far as possible, intensified, especially with a view to the preparation of technicians and the sending of consultants to make possible an integrated development of the census plans proposed for the year 1950.

3. To bring the preceding resolution to the attention of the appropriate authorities of the United States.

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13. REORGANIZATION OF CIVIL REGISTERS

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That the statistics on natural trends (births and deaths) of the population are of fundamental importance, and that the degree of development of such statistics greatly influences the usefulness of the data obtained from censuses;

That in a large proportion of the countries of this continent there exist serious problems in the collection of primary data which have as their source the Civil Registers;

That it is desirable that, as soon as possible, the study of the reorganization of the

Civil Registers be intensified with a view to obtaining more complete statistics on the population trends (births and deaths) of the American nations, and especially to permit their international comparison using as a basis the results of the 1950 Census of the Americas;

In view of the related proposal of the Peruvian delegation, which is annexed hereto,

RESOLVES:

1. To recommend to the countries of this hemisphere that they prepare the studies necessary to determine the bases for the establishment and improvement of the statistics on natural trends (births and deaths) of the population, in each country, so that these statistics may be more complete and may permit inter-American comparison after the 1950 Census of the Americas.

2. To recommend that the attached proposal of the Peruvian delegation concerning the reorganization of the Civil Registers and the studies to which this refers, be sent to the Inter American Statistical Institute as soon as possible, so that the Institute may prepare the studies and documents necessary to permit the Second Session of the Inter American Statistical Institute to deal with the problems relative to the reorganization of the Civil Registers and the improvement and comparability of statistics on natural trends (births and deaths) of the population in the American nations.

Appendix to Resolution No. 13

Proposal of the Peruvian Delegation Concerning Reorganization of the Civil Registers

The Peruvian delegation presents for the consideration of the Committee on the 1950 Census of the Americas the following draft resolution:

The Committee on the 1950 Census of the Americas,

CONSIDERING:

That the taking of the Census of the Americas will furnish knowledge of the actual population of the countries of the Western Hemisphere at a given time;

That for the statistical verification of the growth process of this population in the years following said census, and after the conduct of appropriate studies, it would be necessary to adopt a uniform minimum plan for the collection of data and compilation of statistics on births and deaths;

That, as a basis for said study, the chief of the Demographic Statistics Department of the National Statistical Bureau of Peru, Mr. Carlos Uriarte, has prepared a work entitled "El Censo Continental de 1950 y las Estadísticas del Movimiento de la Población en los Países Americanos," a copy of which is submitted to the Committee with this resolution;

That the adoption of the above-mentioned plan should be linked to the functioning of the Civil Registers through an organization of national character to permit the centralization and co-ordination necessary for the compilation of data and the furnishing of pertinent statistical information,

RESOLVES:

To recommend to the Inter American Statistical Institute that it study the form and conditions under which the Civil Registers of the American countries could function following 1950, according to uniform standards, in so far as possible, particularly in respect to the following points:

1. In so far as the law permits, to have a national office empowered to centralize the files of registry documents, to prepare and furnish pertinent statistics, and to issue, on request, certified copies of the records under the same conditions as the offices of origin.

2. Regional, provincial, or sectional offices, subordinate to the national, whose geographic distribution would be related to the density and distribution of the population, those in the smaller localities being under the charge of the officials or employees of other administrative branches, until the establishment of separate registration offices may be possible.

3. Use of uniform forms for the collection of data relative to the principal registration facts, particularly those referring to births and deaths.

4. Use of a minimum list of causes of death, as well as a uniform death certificate, differentiating between causes given by a doctor and those given by other authorized persons in the absence of a doctor.

5. Semi-annual publication of statistics on population trends (births and deaths), indicating the corresponding population increase, after the date of the 1950 Census of the Americas.

14. TEST OF THE COMPLETENESS OF BIRTH REGISTRATION IN THE 1950 CENSUS

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That the Civil Register is the source from which the number of registered births is determined;

That this registration does not achieve its purpose in all countries of the Western Hemisphere, because there are omissions in the registration;

That it would be well to add to the 1950 Census of the Americas proof of the completeness with which the permanent registers in the American nations accomplish the registration of births,

RESOLVES:

To recommend to the Coordinating Board of the Committee on the 1950 Census of the Americas that it study the possibility of including in that Census a test of the completeness of birth registration, and the form in which such a test could be carried out.

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15. COEFFICIENT OF CENSUS OMISSION

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That it is advisable to avoid possible criticism of the results of the census as being incomplete or inflated;

That in some cases corrections for probable omissions are made without indicating the coefficient which is used;

That no uniform international procedure now exists for determining the coefficient of census omission,

RESOLVES:

1. That the Coordinating Board of the Committee on the 1950 Census of the Americas study the most appropriate methods for determining the coefficient of omission or error, taking into consideration regional differences.

2. To recommend that in the publications of census results the coefficient used be indicated and that, if possible, the corrected figures be shown in a summary table, and that the statistical tables showing the detailed distributions would refer only to the enumerated population.

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16. TRANSMITTAL TO THE INTER AMERICAN STATISTICAL INSTITUTE OF RESOLUTIONS OF THE CENSUS COMMITTEE

The Committee on the 1950 Census of the Americas, assembled in Washington, D. C., September 2-8, and 16, 1947,

CONSIDERING:

That, by action of the Inter American Statistical Institute, there was constituted the Committee on the 1950 Census of the Americas, with representatives of the statistical organizations of the 22 countries of the Western Hemisphere, which committee held its first session in the city of Washington, September 2-8, and 16, 1947;

That, in accordance with the aims for which it was created, and in the course of the deliberations of the session mentioned above, the Committee has carefully studied in their various aspects the questions relative to the preparation and execution of the program of the 1950 Census of the Americas, which owes its beginning and development to the Institute, by special request from the First Inter-American Demographic Congress, held in Mexico City in 1943;

That, as a result of said study, the Committee has approved 15 resolutions;

That, because of their nature, these resolutions should be brought immediately to the attention of the Inter American Statistical Institute, so that under its auspices the Committee on the 1950 Census of the Americas can, in the fulfillment of its duty, adequately carry out its aims,

RESOLVES:

To transmit to the Inter American Statistical Institute the official text of the resolutions which the Committee on the 1950 Census of the Americas has passed in its first session, so that the Institute may provide, to the best of its ability and as circumstances permit, the support necessary for the adequate fulfillment of these resolutions.

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17. FOCAL POINT

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That relations between international and national organizations should be based on reciprocal co-operation and on the same spirit of international collaboration that exists among the 22 nations of the American continent;

That a latent necessity exists to establish in each nation a national center of interchange of statistical information to serve as a medium for relations with the other American nations and with the international organizations interested in statistical information;

That the Executive Committee of the Inter American Statistical Institute, at its session in Rio de Janeiro in January 1946, recommended the creation of National Focal Points responsible for supplying international organizations with the information necessary for accomplishing their purposes,

RESOLVES TO MAKE THE FOLLOWING RECOMMENDATIONS:

A. *To the international organizations:*

1. For the co-ordination of international statistics, and with regard to the possible creation of an international focal center, it is recommended to the international organizations that, taking into account the national statistical interests and resources, they reach agreements among themselves directed toward:

a. Determining which should be considered as international organizations with statistical interests, and defining their specialized fields of action, in order to effect selective provision of national statistical information.

b. Planning and co-ordinating the requests for statistical information, avoiding duplication insofar as possible.

c. Establishing among themselves an effective interchange of the information received.

d. Determining the manner and frequency of supplying their statistical materials to each National Focal Point (national center of interchange of statistical information).

2. With regard to the planning and requesting of statistical information, it is recommended to the international organizations that they:

a. Grant to the countries participation in the formulation of plans for international questionnaires and surveys.

b. Inform the countries, opportunely, of such plans in order to receive their suggestions, when in the judgment of the international organization concerned the provisions of the preceding clause are not feasible.

c. Conduct the above mentioned participation and requests for statistical information through the central public statistical organization in which the National Focal Point functions.

d. Transmit, opportunely, to the National Focal Point in every instance copies of the documentation sent to other national public statistical organizations, when for special reasons the international organization maintains direct contact with these organizations also.

3. With regard to requests for unpublished statistical information that is not of a confidential nature, it is recommended to the international organizations that such requests be restricted to instances of specific and justified necessity, and that they be made in as clear and brief a form as possible.

4. With regard to the statistical information that international statistical organizations receive, elaborate, and publish, it is recommended:

a. That a co-ordinated program of publications and of publication exchange be agreed on.

b. That in these publications information on methods employed, bases of calcula-

tion, adjustments, reservations, sources of information, dates, and other pertinent information be given.

c. That if possible the respective country be consulted, before publication, on any change introduced into the statistical information furnished by it.

d. That every effort be made to have translations express as precisely as possible the thought of the original document, and that for this purpose they be made the responsibility of personnel well qualified both technically and linguistically.

5. With regard to statistical information of interest and value to more than one international organization, it is recommended that its exchange be the responsibility of the specialized international organization.

6. Regarding the manner and frequency of supplying statistical information, it is recommended to the international organizations that, in reciprocation for the national statistical information received, they provide gratuitiously and in sufficient quantities to meet the national needs of each country:

a. International statistical publications, periodic and special.

b. Information relative to the methodology and to the procedures recommended for the collection and preparation of data (i.e., recommended international standards).

c. Any other information relative to statistical activities of interest or value to the national public organizations.

7. Until the international organizations with statistical interests are determined, their relations co-ordinated, and the international focal center established, it is recommended to the Inter American Statistical Institute that, assuming the representation of the National Focal Points of the hemisphere, it act in collaboration with the Statistical Commission of the United Nations and with the Specialized Agencies for the purpose of effecting these recommendations.

B. *To the American governments:*

1. For a better organization of the national statistics and an effective co-ordination with the international statistical organizations, it is recommended to the countries of the American Hemisphere that they:

a. Integrate their public statistical organizations in a national statistical service, under a single technical direction and co-ordination.

b. Create, in those countries which have not yet achieved a unified technical direction and co-ordination, a supreme advisory statistical organization.

c. Make official or formal, as soon as possible, the existence of the National Focal Point (national center of interchange of statistical information), in the public statistical organization which is executive and central, taking all the measures necessary for the proper performance of its functions.

2. It is recommended that the National Focal Point be assigned the following responsibilities:

a. Receipt, study, and transmission, and diligent reply to requests for statistical information from the international organizations with statistical interests.

b. Seeing that the international statistical organizations are supplied with explanatory notes on the meaning, limitations, reservations, methods employed, bases of calculation, adjustments, sources of information, dates, etc., of the national statistical data in reports sent to those organizations.

c. Creation and maintenance of statistical archives both for publications and unpublished information received from international organizations, and for national replies, data, and publications.

d. Timely and gratuitous distribution, among the national public organizations, of a sufficient quantity of the international statistical material received.

e. Promotion of use of technical standards, classifications, and recommendations of an international statistical character by the national public statistical organizations.

f. Co-operation in the formation of a national statistical bibliographic and documentary index.

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18. RELATIONS BETWEEN THE IASI AND OTHER INTERNATIONAL ORGANIZATIONS

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That the Economic and Social Council of the United Nations has endorsed the report of the Statistical Commission which recognizes the value and importance of contributions to the improvement of statistics made by regional organizations, and which suggests that regional organizations such as the Inter American Statistical Institute should be utilized by the United Nations to the greatest extent possible;

That the Inter American Statistical Institute has developed close and effective working relationships not only with the General Bureaus of Statistics, directors of which are automatically members of the Institute, but also with other official and non-official statistical organizations, and with individual statistical technicians throughout the Western Hemisphere;

That the Inter American Statistical Institute has consistently championed the principle of maximum direct and technical national participation in international statistical programs —a principle wholly approved in this First Session of the Inter American Statistical Institute,

RESOLVES:

1. To request the United Nations and its Specialized Agencies to give appropriate representation to the Inter American Statistical Institute, as a body, in any work of those organizations which is related to statistical standards and statistical projects in which the participation of the American nations, or their individual support, is desired.

2. That the secretary general of the Inter American Statistical Institute be instructed to transmit this resolution to the various organizations concerned.

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19. CO-ORDINATION AND STIMULATION OF CARTOGRAPHIC ACTIVITIES

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That cartography and statistics are mutually complementary sciences;

That an adequate cartographic basis is essential to the proper collection, determination of scope, tabulation, and publication of most statistical data, such as the censuses of population and agriculture, industrial and other economic censuses, and cultural censuses;

That a recent comprehensive survey of the existing cartographic bases for the 1950 Census of the Americas has demonstrated the inadequacy thereof, necessitating costly emergency measures to remedy the situation;

That it is a known fact that less than ten per cent of the inhabited land areas of the world are adequately mapped today;

That due consideration should be given at the earliest practicable moment to providing for adequate maps for forthcoming censuses because the surveying and mapping of the vast areas in need thereof, even with accelerated modern techniques, will require much time, and because emergency measures are both costly and productive of sketchy results;

That uniform map bases contribute substantially to the greater comparability of statistical data;

That the statistical agencies would derive substantial benefit from the acceleration of the programs of their respective national cartographic services;

That several member governments of the United Nations and certain international organizations have already urged the early consideration of an international program for the stimulation of cartographic operations in their various phases and according to uniform standards (the United States of America, the French Republic, Denmark, the Pan American Institute of Geography and History—21 governments—and the International Geographic Union, documents E/257, E/258 and E/483 of the United Nations), wherein are proposed for consideration also the co-ordination of the cartographic services of the United Nations and its Specialized Agencies and the concrete suggestion that a group of experts representative of certain of the major nations and the interested Specialized Agencies be called together by the secretary general to study all phases of the problem,

RESOLVES:

To express to the Executive Committee of the Inter American Statistical Institute its interest in the convocation, at the time circumstances permit, of a group of experts representative of certain of the major nations which are members of the IASI, and of the interested Specialized Agencies, to consider the co-ordination of the cartographic services of the United Nations and its Specialized Agencies and the stimulation and unification of carto-

graphic activities on a word-wide scale, emphasizing at the same time the benefits accruing therefrom to the collection, determination of scope, tabulation, publication and comparability of statistical information, and the importance attached to the timeliness and availability of adequate maps in the conduct of all human relationships—political, economic, and social.

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20. THE TEACHING OF STATISTICS IN COLLEGES AND IN INTERMEDIATE AND SECONDARY SCHOOLS

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That statistics is of constantly increasing importance as a method of observation or experimentation in various fields of study, and as a basis for guiding the actions of public authorities in their economic and social policies, and of private enterprises in their administrative and commercial policies;

That to obtain reliable statistics the public services or private institutions which undertake the compilation of statistics must have at their disposal personnel properly trained for this purpose;

That it is essential that the research workers in the fields in which statistics are used as a means of observation or experimentation should master the elements of statistics, and that the responsible persons in the political, economic, and cultural life of the country should be well enough acquainted with the elements of statistics to be able to interpret correctly the published statistical data and studies;

That statistics is in constant evolution, and that, in order that a country may be informed of and contribute to new developments, it is essential that some specialists devote themselves entirely to purely scientific research in the field of statistics, the results of which will benefit the entire statistical organization and activity of the country,

RECOMMENDS:

1. That the authorities responsible for education in the American countries reconsider the programs of study with the object of assuring to the teaching of statistics, in case it does not already have it, the place which its importance in modern civilization warrants.

2. That in secondary and intermediate education, the curriculum include at least:

a. In commercial schools, elements of statistics with particular application to economic and business problems.

b. In normal schools, elements of statistics with particular application to problems of education.

c. In the other secondary and intermediate schools, as far as possible, elementary applications of statistics as illustrations in courses in arithmetic, algebra, geography, and other sciences.

3. That in order to satisfy adequately the needs for statistical education in the various fields of advanced study, a university should provide, as far as possible, a well-balanced system of statistical courses of different types, which can be outlined as follows:

a. In fields in which statistics has little direct application (history, literature, etc.) an introduction to statistical theory (as an element of general culture) requiring only high school mathematics, using as illustration applications to different fields.

b. In each field in which statistics has important application (political, economic, and social sciences, medicine and hygiene, agronomy, engineering, pedagogy, and psychology, etc.), courses appropriate to the professional needs of each field, that is:

(1) Statistical procedures (statistical definition of the problem to be studied; definition and classification of statistical units; methods of recording and preparing data; current deficiencies of the data and resulting limitations; etc.), with special reference to the particular subject field.

(2) a. Introduction to general statistical theory.

b. Advanced statistical theory (requiring more advanced mathematical knowledge).

(3) Advanced applied statistics, i.e.,: Econometrics, biometry, psychometry, etc.

4. That, in addition to the statistical teaching given as part of the general academic studies in the different fields which are mentioned in paragraph 3, there should be organized,

in a limited number of universities that have the proper staff and appropriate practical means, specialized courses destined to train different types of professional statistical technicians, for which corresponding titles, diplomas, or credits should be granted; the plans of study of these courses should be adjusted as strictly as possible to the recommendations of resolution No. 23.

5. That in order to provide adequate means of furthering the development of statistics in both theory and application, centers of statistical research be created in universities, around which the different courses of statistics within the university be grouped in order to build a department or institute of statistics; or if such an arrangement is not possible, other measures be adopted that can obtain the same results.

6. That, with respect to the administrative framework for teaching statistics in a university, including the development of consulting services, and a statistical laboratory and library, the following reports be taken as a starting point for further studies:

a. "The Teaching of Statistics," a report of a Committee of the Institute of Mathematical Statistics, August 1947.

b. "Personnel and Training Problems Created by the Recent Growth of Applied Statistics in the U. S.", National Research Council (reprint and circular series, number 128), Washington, D. C., May 1947.

c. "Statistical Teaching in the Western Hemisphere," by Milton da Silva Rodrigues, Inter American Statistical Institute, Washington, D. C., August 1947.

d. "Minimum Plans of Study for the Training of Statistical Technicians: Preliminary Report," by Carlos E. Dieulefait and Robert Guye, Inter American Statistical Institute, Washington, D. C., August 1947.

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21. TRAINING COURSES FOR THE PERSONNEL OF PUBLIC STATISTICAL SERVICES

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That the volume and complexity of the statistics which the public authorities must compile tend to increase year after year;

That in view of the progress in statistics the preparation and interpretation of data is of an increasingly scientific nature;

That as a consequence it is imperative to give the personnel of public statistical services an adequate technical preparation;

That such training includes knowledge and experience so specialized that the general courses of advanced or secondary study cannot be overburdened with them;

That the effort and expenditure for such training would be amply compensated by the many advantages derived from the adoption of modern statistical methods,

RECOMMENDS:

1. That in each American country, or in groups of neighboring countries, courses for professional training for the different categories of personnel in public statistical services be organized as soon as possible.

2. That these courses should prepare for two distinct levels:

a. Elementary courses for the subordinate staff.

b. Special courses for the intermediate technical staff.

3. That the courses for the subordinate staff should be organized within each agency by its own technicians or by a central body or also by correspondence or by radio.

4. That in respect to courses for the intermediate technical staff, a condition for admittance should be at least completed secondary studies; that such courses be organized as far as possible in collaboration with the existing educational institutions, completing their teaching without duplication.

5. That certificates of study be awarded to those who have satisfied the requirements of the final examinations, periodic tests, practical work, etc., and that it be established that the possession of such a certificate constitute, if not an essential requirement, at least a factor of primary importance in obtaining positions or promotions.

6. That seminars be organized among advanced and intermediate technicians—either within the statistical organization or apart in a scientific society—to provide opportunity for exchanging information resulting from their varying experiences and keeping current their knowledge of the latest advances of statistics.

22. INTER-AMERICAN COURSES OR SCHOOLS OF ADVANCED STATISTICAL TRAINING

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That in many countries it is necessary to increase the number of advanced statistical technicians trained in accordance with the latest advances in statistics;

That in the countries in which the organization of statistics and the teaching of this subject is only slightly developed, special difficulties are encountered in organizing courses appropriate for training such statistical technicians,

RECOMMENDS:

1. That there be organized in some countries inter-American schools or courses for advanced statistical preparation, open to technicians from different countries and, if necessary, with the collaboration of instructors from several countries.

2. That, to the degree possible, such inter-American schools or courses be combined with the activities of those national centers of advanced study which have been able to comply adequately with the recommendations of resolution No. 20, paragraphs 3, 4, 5, and 6, and those of resolution No. 23.

3. That the curriculums of such schools or courses of advanced statistical training be such that they offer various possibilities of study, from concentrated courses of short duration in one specialized statistical field (with an adequate general preparation), up to extensive studies for the complete training of different types of advanced statistical technicians.

4. That, in order to facilitate attendance at such schools of advanced statistical training for students from all countries of the continent, an inter-American fund for scholarships for advanced statistical training be established.

5. That the Committee on Statistical Education study and formulate concretely the details necessary to carry out the recommendations of the preceding paragraphs.

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23. MINIMUM PLANS OF STUDY FOR THE TRAINING OF ADVANCED STATISTICAL TECHNICIANS

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That the knowledge, experience, and capacity required, for discharging the duties of the advanced technical personnel of a statistical service, have become so broad, complex, and diverse that division of labor and professional specialization in determined aspects of statistics has become an imperative necessity;

That three fundamental aspects of advanced statistical knowledge and activities can be distinguished: (a) Statistical theory and its mathematical foundation; (b) statistical analysis; (c) statistical procedures and statistical organization;

That to satisfy the needs of the statistical organization of the country, three types of statistical preparation are required, corresponding respectively to the different aspects of knowledge cited previously;

That, taking into account not only the necessity of classifying statistical personnel but also that of organizing their training, it is desirable to define as far as possible these types of statistical technicians, enumerating for this the programs of minimum knowledge required for each type of preparation,

RECOMMENDS:

1. That, as a basis of the classification o :advanced statistical personnel and as a foundation for their professional training, the schemes given below (schemes I and II) be adopted.

2. That the Inter American Statistical Institute pursue the study of the plans of study and programs for the training of the different types of statistical technicians, taking as a point of departure the study, "Minimum Plans of Study for the Training of Statistical Technicians: Preliminary Report," by Carlos E. Dieulefait and Robert Guye, Inter American Statistical Institute, Washington, D. C., August 1947.

Scheme I

Knowledge Required of Different Types of Statistical Technicians

Type of statistical technicians	Statistical theory (with mathematical background)	Statistical procedures[1] (with administrative compliments)	General subject fields[2] (to which statistical analysis applies)
A. Mathematical statistician	Advanced with thorough background in mathematics)	Intermediate (in a few fields)	Intermediate (in one or two subject fields)
B. Statistical analyst	Intermediate	Advanced, but limited to the field of specialization	Advanced, in subject fields of specialization[3]
C. Statistical administrator	Elementary	Advanced and extensive (with thorough background in administration)	Elementary (in several subject fields)

[1] Statistical definition of the problem; definition and classification of statistical units; methods of collecting and preparing the data; current deficiencies of data and resulting limitations; etc.

[2] Subject fields related to: Economic science; social science; political science and administration; agronomy; engineering; medicine and public health; education and psychology; natural sciences; etc.

[3] For example: Doctor in economics; doctor in social sciences; agronomist; engineer; doctor of medicine; etc.

Scheme II

Principal Technical Functions and Posts Corresponding to the Different Types of Statistical Technicians

A. *Mathematical statistician*

1. Principal technical functions:

Collaboration in the planning of surveys and in the execution of statistical analysis, especially when it is necessary to formulate new or highly mathematical theories and techniques. Design of experiments. Planning of surveys to be done by sampling and application of statistical inference and estimation techniques to such data. Research on bias. Research on cost in the investigations. Advice to directors general or chiefs of units who are statistical administrators or statistical analysts, on any point related to the preparation or analysis of data which lends itself to special mathematical treatment.

2. Posts (illustrative examples):

a. Director general, assisted by a subdirector who is a statistical administrator.

b. Technical consultant to a director general or to a chief of a unit.

c. Chief of a unit (especially of a unit in charge of a sample survey) with the assistance, if necessary, of a statistical analyst specialized in the subject field of the research.

B. *Statistical analyst (specialized in a particular subject field)*

1. Principal technical functions:

Formulation of programs of statistical research in the field of specialization (economics, public health, education, etc.), and supervision of their execution. Application of statistical techniques to the data collected for the purpose of giving answers to the questions propounded by the administration, if necessary with the collaboration of a mathematical statistician.

2. Posts (illustrative examples):

a. Director general, assisted by a subdirector who is a statistical administrator.

b. Technical consultant to a director general or to a chief of a unit.

c. Chief of a specialized unit.

C. *Statistical administrator*

1. Principal technical functions:

Direction and supervision of the various steps of collection, compilation, editing,

tabulating, and tabular or graphic presentation of the data. Cooperation with statistical analysts and mathematical statisticians in framing programs for statistical research and in analysis of the data.

2. Posts (illustrative examples):

a. Director general, with statistical analysts and mathematical statisticians as consultants.

b. Subdirector or subchief of a unit, under a director general or chief who is a statistical analyst or a mathematical statistician.

c. Chief of a non-specialized unit.

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24. MEASURES TO PROVIDE TEACHERS OF STATISTICS

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That a program of statistical education cannot be initiated and carried out without there being available a more adequate number of capable teachers than now exists;

That a successful teacher must have a sound knowledge of the fundamental theory of statistics and an active interest in both the practical applications of statistical method and in new developments in theory;

That professional people and teachers whose principal interests and training are in some field other than statistics, and whose knowledge of statistical theory and interest in statistical research are secondary, cannot be considered as adequately prepared for teaching statistics;

That the preceding resolutions cannot be carried out without an additional supply of highly-qualified teachers;

That in this respect an emergency exists, calling for extraordinary measures to augment the supply of competent teachers,

RECOMMENDS:

1. That in the inter-American schools or courses offering advanced statistical training mentioned in resolution No. 22, special attention be given to the proper training of teachers in statistics.

2. That the authorities responsible for programs of statistical education make provision for the training of teachers of statistics at institutions which offer the highest training in statistics.

3. That scholarships be granted to send students possessing adequate mathematical preparation, to take courses at institutions which offer the highest training in statistics.

4. That if no properly trained statistical teachers are available in a teaching center, specialists from elsewhere be engaged, or the initiation of statistical courses be postponed until competent statistical teachers can be obtained.

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25. COMPETENCE AND CONDITIONS OF EMPLOYMENT OF THE PERSONNEL OF PUBLIC STATISTICAL SERVICES

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That it is to the best interest of public statistical services that its technical personnel be composed exclusively of persons who can be considered as having adequate professional preparation;

That the training of professional statistical technicians requires large expenditures of energy, time, and financial resources, and that, in consequence, it is necessary to attempt to use to the maximum of their production those persons who possess a good statistical preparation;

That stability, suitable remuneration, and ample social security benefits constitute a good stimulus for capable persons to devote themselves to statistical careers,

RECOMMENDS:

1. That the conditions of recruitment and promotion of technical personnel, whatever

may be the category, of public statistical services, be established according to strictly technical standards.

2. That the regular legislation of each country include provisions tending to guarantee stability, suitable remuneration, and social security to such technical personnel.

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26. GENERAL STATISTICAL TEXTBOOKS IN SPANISH AND PORTUGUESE

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That statistical textbooks and teaching manuals in Spanish and Portuguese are essential for developing the teaching of statistics in Latin America;

That there is not a large number of statistical textbooks available in Spanish and Portuguese and that most are general in character, whereas all types of elementary, advanced, and specialized textbooks can be found in other languages;

That professors or instructors of statistics often have difficulty in maintaining an up-to-date knowledge of the existence of textbooks on which to base their teaching,

RECOMMENDS:

1. That the Committee on Statistical Education, through a subcommittee to be designated to this effect, should select from the North American and European statistical textbooks a few which could answer best the present needs of Latin American users, and should undertake the necessary steps to have them translated and published in Spanish and Portuguese.

2. That the above mentioned Committee, through a subcommittee to be designated to that effect, should undertake the necessary steps in order to promote the preparation by various authors, and the publication, of a series of teaching manuals, each one covering a determined chapter of a general course of statistics.

3. That the Permanent Office of the Inter American Statistical Institute, in collaboration with the Committee on Statistical Education, and developing its previous work, should endeavor to maintain up-to-date a selected bibliography of statistical textbooks, giving as much information as possible on the character and content of each book.

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27. A SERIES OF MANUALS ON STATISTICAL PROCEDURES IN DIFFERENT FIELDS

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That the teaching of statistics should include the study of the procedures most frequently used in the collection and preparation of data, and of the limitations which certain deficiencies of the data impose on their interpretation;

That the teaching and study of this aspect of statistics is greatly impaired by the absence, principally in Spanish and Portuguese, of systematic manuals on the subject,

RECOMMENDS:

1. That the Committee on Statistical Education, through a designated subcommittee, should undertake the opportune steps for promoting, with the collaboration of experts from the public statistical services, or of other specialists, the publication, especially in Spanish and Portuguese, of a series of manuals on the statistical procedures in different fields.

2. That, in general, each manual should cover the following topics: Object, importance and use of the statistical branch considered; sources of information; collection of data and the organization required; statistical units, their definitions and classifications; typical values; common deficiencies of the data and resulting limitations to their interpretation; some illustrative tables and graphs (with data from various countries); selected bibliography.

3. That this series of manuals should be planned to cover, among others, the following branches of statistics: Population censuses; vital statistics; migration and tourism; national income and wealth; economic barometers; agriculture, forestry, and fishery; mining; manufacturing; building and construction; transportation; banking, finance and insurance; foreign trade; hospitals and public health; education; public finance; employment and unemployment, hours of work, and wages; family living conditions; cost-of-living; housing.

28. PRACTICAL EXERCISES IN STATISTICAL TEACHING

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That for the teaching of statistics it is essential to supplement the theoretical exposition of statistical methods with practical exercises performed by the student himself, .

RECOMMENDS:

1. That special attention be given to practical aspects of statistical education and that efforts be made to make it a systematic and compulsory feature of statistical studies in institutions where it is not yet applied or is but little applied.
2. That the Committee on Statistical Education establish an illustrative list of "laboratory manuals" or "workbooks" in use at present in various teaching centers.
3. That the above-named Committee, by means of a subcommittee to be designated to that effect, should promote the preparation and publication in Spanish and Portuguese of "manuals for statistical laboratory."
4. That the manuals: Correspond to at least two different levels of statistical teaching (elementary and more advanced); cover, with a series of practical problems, the main sections of the usual course in statistical methods; be based on practical examples selected from statistical data of different American countries and referring to problems in various fields.

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29. NATIONAL STATISTICAL ASSOCIATIONS AND CONGRESSES

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That it is important to give opportunities to the technicians in statistical services, as well as to the members of other professions who use statistics in their studies, to broaden their knowledge by means of an exchange of the results of their various experiences;

That it is important for the future progress of statistics to awaken and maintain in the younger generation an interest in statistical problems;

That the most effective way of furthering these ends is through the medium of national and local organizations,

RECOMMENDS:

1. That national statistical congresses be organized periodically in the different countries; that the statistical services, public and private, as well as the institutions of scientific research, give ample facilities and financial support to their technicians and professional statisticians for attending these congresses.
2. That the statistical associations of the different countries give especial attention to the younger generation, providing it with opportunities that will allow completion of training and maintenance of a lively interest in statistical questions; and that with this purpose some of the following measures be taken: Reduction of the membership fees for younger members; creation of a section for junior members in the association, or simply organization of special parallel meetings; organization of visits to statistical services under the guidance of an experienced technician, etc.
3. That the Committee of Statistical Education, by means of a subcommittee designated for that purpose, should from time to time propose the theme and the conditions for an inter-American statistical contest, entrusting the national associations (or in their absence appropriate committees of statisticians) with the organization of the contest in their respective countries; that an inter-American jury award prizes for the best works which are presented.
4. That in the countries in which there are no statistical associations the necessary initiative be taken in order to organize them.

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30. FOREIGN TRADE STATISTICAL CLASSIFICATION

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That the opinions expressed in the round-table meeting on foreign trade statistical classification were unanimously in favor of the application of the Minimum List of Classification of Foreign Trade and were in agreement on the necessity of effectuating it in all the American countries;

That furthermore the desirability of co-ordination in the work of the various countries on this topic has been recognized, and that the national problems of reclassification, using a uniform criterion, should be studied and resolved through the appointment of adequate technical personnel in the IASI;

That it is advantageous to accept the offers* made by the Brazilian Institute of Geography and Statistics and by the National Bureau of Research, Statistics, and Census of the Argentine Republic in the sense of co-operating with the means at their disposal for the greater success of the work,

RECOMMENDS:

1. That the Executive Committee of the IASI consider the possibility of creating a technical section, devoted to:

a. The establishment, development, and perfecting of the Basic Classification Scheme of Foreign Trade.

b. The preparation and co-ordination of national convertibility indexes.

c. The preparation of a general nomenclature in Spanish, which will embrace the over-all contents of said indexes.

2. That ways of providing the IASI with the financial means necessary to execute the preceding recommendation be considered, and that in the budget of the Institute sufficient funds be assigned for this purpose.

3. That the Executive Committee of the IASI take into account also the offers of collaboration that have been made in this respect.

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31. FOREIGN TRADE STATISTICAL PRACTICES AND DEFINITIONS

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That in order to attain substantial uniformity and effective comparability in the foreign trade statistics of the American nations there should be adopted by all the American countries, not only a common basic scheme for classification of commodities, but also uniform practices and definitions in respect to other fundamental aspects and elements of statistical information on imports and exports;

That the recommendations for this purpose should be formulated and treated as a concrete program of action which each country will make every effort to carry out;

That the recommendations contained in the International Convention Relating to Economic Statistics of 1928 and those later formulated in the basic document for the round-table discussion on foreign trade statistics in the Americas constitute in general a collection of adequate measures for achieving the results considered above,

RECOMMENDS:

1. That there be applied to the foreign trade statistics of the American nations the definitions and standards contained in pages 11 and 12† of the study entitled "Methodology in Foreign Trade Statistical Practices in the Americas," by Santiago Woscoboinik: No. 1-10, inclusive, with the exception of item (e) of point 2 and item (b) of point 5, which recommendations should be formulated definitively by the technical section on foreign trade statistics of the IASI, the constitution of which has been suggested through another resolution.

2. That the Basic Classification Scheme of the IASI be adopted as the principal scheme or as a complementary conversion scheme for the classification of individual commodities in foreign trade statistics.

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* Offer made by Mr. O. A. de Moraes for the Brazilian Institute of Geography and Statistics, to lend aid to countries desiring assistance in setting up national convertibility indexes, and to review and criticize national indexes already set up. The Brazilian Office for this purpose would not carry out independent work, but would be subordinate to the IASI or to whatever permanent foreign section or committee might be established within the IASI.

Offer made by Mr. Enrique Catarineu for the National Bureau of Statistics in Argentina, to review and co-ordinate the Spanish translations of the national convertibility indexes so as to arrive at a single uniform list to be used throughout Latin America.

† See appendix to this resolution.

3. That the permanent technical section on foreign trade statistics of the IASI be responsible for the final drawing up of the recommendations for carrying out more effectively points 1 and 2 of this resolution.

Appendix to Resolution No. 31

Extract from Pages 11 and 12 of "Methodology of Foreign Trade Statistical Practices in the Americas"

RECOMMENDATIONS:

1. *Coverage of imports and exports (special and general trade):* Adoption, as a starting basis for a uniform system, of the recommendations of the 1928 International Convention with the following qualification: A more comprehensive definition is needed for "indirect transit trade." (The present definition fails to provide for merchandise entered into *private* warehouses—because of the nation's lack of Customs-bonded warehouses—and which later leaves the country without having been nationalized through payment of duties or through transformation or repair.)

2. *Determination of values:* Adoption of the recommendations of the 1928 International Convention with the exception of paragraph III (b), part I, relating to the use of official valuations for statistical purposes. In addition, the following procedures are recommended:

a. The methods of conversion of values in foreign currencies into national currencies should be clearly indicated in the official statistical trade publications;
b. The conversion of amounts invoiced in foreign currencies should be shown at the commercial rate of exchange (rates at which the transactions were actually liquidated or nearest approximations thereto);
c. The values should be shown in terms of the actual monetary unit in use in the country;
d. In cases where multiple foreign exchange rates exist, calculations of all values, in addition to valuations established as in (b), should be shown in a standard unit of value, the United States dollar or another unit of value determined on the basis of the world price of gold;
e. For total imports (aggregate imports) and for the breakdown of total imports by countries, values should be published both on the c.i.f. and the f.o.b. basis.

3. *Determination of quantities:* Adoption of the recommendations of the 1928 International Convention.

4. *Territory to which the statistics apply:* Adoption of the Standard List of American Countries recommended by the League of Nations, or adoption of the Minimum List of Countries of the League (with adequate revisions, as proposed in chapter 4).

5. *Statistical territories of provenance and destination:* (a) Adoption of the definitions recommended by the 1928 International Convention with certain modifications to cover special problems arising in the trade of the Hemisphere or adding to the comprehensiveness of the definitions. (b) Uniform adoption of a double system of recording trade by countries, as follows: For imports, parallel, recordings by country of origin and by country of purchase; and for exports, parallel recordings by country of consumption (final destination, as far as ascertainable) and by country of sale.

6. *Gold, silver, and specie:* Adoption of the system in use in the United States foreign trade statistics, i.e., separate returns—not included in the merchandise trade—of gold and silver bullion. In addition, separate returns of specie, excluded also from the merchandise trade. Gold and silver for industrial purposes included in the merchandise trade.

7. *Bunker fuel:* Bunker fuel supplied to national vessels in foreign countries and to foreign vessels in the national ports, to be uniformly included or excluded from imports and exports, respectively. If included, a proper classification should cover these items. If excluded, separate returns should be shown.

8. *Minor exclusions:* As far as possible, the *same* items (minor or special transactions) should be excluded from the trade returns of all countries.

9. *Time coverage:* Statistics should cover calendar months and years.

10. *General recommendation:* An introductory text should be presented in at least the yearly statistical trade publications, with detailed explanations as to the practices, definitions, and methods followed by the country in the compilation and publication of the trade statistics.

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32. INDUSTRIAL STATISTICS

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That the opinion of the participants at the round-table meeting on industrial statistics has been unanimous on the impossibility of arriving at immediate conclusions of a technical nature on the problems brought up in the works presented as bases of discussion—"Memorandum on the Statistics of the Manufacturing Industry in the American Nations," by Santiago Woscoboinik; and "Methodology in Statistics of the Mineral Industries in the American Nations," by Bjorn Koch;

That the importance and difficulty of the topics discussed requires detailed study of these documents in order to arrive at satisfactory conclusions,

RECOMMENDS:

1. That the Executive Committee of the IASI consider the possibility of naming a permanent committee of the IASI the function of which will be to study the documents presented as a basis for discussion at the round table mentioned, and the presentation of specific recommendations on the problems discussed in these documents.
2. That this task of the permanent committee be effected through continual and reciprocal consultation and exchange of opinions among the members who compose it, by means of whatever procedure they deem desirable.
3. That the members of this permanent committee be the chiefs of the delegations attending these conferences or persons to whom they delegate this responsibility.
4. That for greater effectiveness in the work of this permanent committee the following persons also be designated as members:

Bjorn Koch, of the Ministry of Economy of Chile.
Santiago Woscoboinik, of the Corporation for the Development of Production of Chile.
Manuel Bravo, of the Department of Industrial Research of the Bank of Mexico.
Enrique Catarineu, Director General of Statistics of Argentina.
Harold McLeod, of the Dominion Bureau of Statistics of Canada.
Andres Perea, Consultant of the Industrial Census of Colombia.

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33. EDUCATIONAL STATISTICS

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That, following study of the status of statistics of education based on the work presented by Mr. Germano Jardim of the Brazilian Institute of Geography and Statistics, it is considered desirable to intensify this work,

RESOLVES:

1. To recommend to the IASI the intensification of the work of its Permanent Committee on Educational Statistics, so that statistics of education can be oriented within the shortest time possible.
2. To solicit from the IASI the translation into Spanish and the distribution of the work of Mr. Jardim, when this study has been completed.
3. To recommend to the American countries that their statistics of education include information on: (a) Students; (b) teaching and administrative personnel; (c) school buildings; (d) budgets; (e) institutions of a cultural type, such as museums, libraries, etc.

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34. STANDARD CLASSIFICATION FOR STATISTICAL MATERIALS

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That there exists an urgent necessity for developing a standard classification by statistical subject matters which could be used in the statistical bibliographies issued in the different countries;

That such a standard classification may have other important applications in the administrative work and organization of national and international statistical agencies;

That it is also highly desirable that the material contained in the statistical publications of the different countries, and especially the general statistical yearbooks, be presented according to a standard plan setting up broad categories acceptable by all countries;

That it may be desirable that such a standard plan correspond to the standard classification by subject matters suggested for bibliographical and associated purposes,

RECOMMENDS:

1. That the question of establishing a standard classification by statistical subject matters for bibliographical and associated purposes, and of a standard plan for presenting statistical material in official publications be the object of systematic study by an appropriate committee of experts.

2. That this proposal be submitted for consideration to the United Nations Statistical Commission with the suggestion that a special subcommittee be designated for that purpose, with the collaboration of the International Statistical Institute and of the Inter American Statistical Institute.

3. That the documents presented at the joint meeting of the International Statistical Institute and the Inter American Statistical Institute held in Washington in September 1947, during the Twenty-fifth Session of the International Statistical Institute and the First Session of the Inter American Statistical Institute, be taken as a starting point for such studies.

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35. INFORMATION ON ORGANIZATION OF NATIONAL STATISTICAL SERVICES

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That it is necessary from both a national and an international point of view to know, periodically and objectively, the structure of the national statistical services, with a view to their better co-ordination,

RECOMMENDS TO THE AMERICAN NATIONS:

1. The preparation of an annual inventory, preferably in graphic form, of the entities or offices which compose the national statistical system, classified according to their administrative dependency and statistical specialty, which can serve as a basis for extension or realignment of the service in the interest of better co-ordination.

2. The supplementation of such an inventory with a detailed description of the organization and its functioning, especially with respect to personnel, remuneration thereof, equipment, and publications.

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36. INVITATION TO CENTRAL BANKS FOR AFFILIATION WITH IASI

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

RESOLVES:

That a special invitation be extended to the central banks of the American nations, or the research departments thereof, to become affiliated members of the Inter American Statistical Institute.

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37. COOPERATION OF COUNTRIES FOR THE TRAINING OF STATISTICAL PERSONNEL

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That the 22 nations of this continent have resolved to take censuses of population, and some of them economic censuses, in 1950;

That not all of the countries of the hemisphere have attained the same level of statistical and census organization;

That many American nations lack sufficient technical personnel to carry out efficiently the extensive work of the 1950 Census,

RESOLVES:

1. To request the special co-operation of the member nations of the IASI in training the statistical personnel of those nations needing it.

2. That such co-operation be effectuated, to the extent possible, in a form similar to that which the United States is offering through its Committee on Cultural and Scientific Co-operation, of the Department of State.

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38. FINANCING THE IASI (PERMANENT QUOTA)

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That the present income of the Inter American Statistical Institute is insufficient to permit the expedient development of its programs and the effective accomplishment of its objectives;

That during the seven years of the Institute's functioning, the requests for services on the part of the countries and organizations interested in statistics have increased appreciably;

That as an immediate result of this First Session and of the conclusions adopted at it, the Institute should immediately intensify its present work and broaden its field of activities, especially in the direction of statistics of foreign trade and in the training of technical personnel;

That the expenses of the IASI have increased markedly in the last few years as a consequence of the general high level of prices;

That only through a sufficient increase in income would the Institute be in a position to continue adequately its present services to the American nations and affiliated organizations, and to extend its activities, to furnish other services, within its program, which are now being requested of it;

That in February of next year there will be convened in Bogota the Ninth International Conference of American States, at which the governments of the continent will be able to consider the feasibility of increasing the Institute's budget in order to permit adequate development of its activities and compliance with the recommendations which the First Session of the Inter American Statistical Institute has formulated,

REQUESTS:

That the governments of this continent which will be represented in the Ninth International Conference of American States in Bogota, increase to $0.50 (U. S.) per thousand inhabitants the permanent quota which the American nations affiliated with the Inter American Statistical Institute contribute for its support.

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39. FINANCING THE COMMITTEE ON THE 1950 CENSUS OF THE AMERICAS (SPECIAL QUOTA)

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

That in 1950 the Census of the Americas will be taken;

That the carrying out of this Census requires a great amount of inter-American planning and co-ordination which should be developed through the Committee on the 1950 Census of the Americas, constituted by IASI;

That for the work of the Committee it is necessary to provide the Institute with the resources indispensable for carrying out the numerous technical projects required of the Committee, such as methodological studies of comparability, acquisition and training of personnel, dispatch of co-ordinating committees to the American countries, establishment of Regional Census Institutes, and organization of the secretariat;

That the Census Committee and the Co-ordinating Board should meet on several occasions, necessitating the subvention of traveling expenses of its members and officers;

That it is the responsibility of the American governments to provide for the special expenses which, in view of the preceding considerations, the Institute will have to meet.

REQUESTS:

Of the governments of this continent which will be represented in the Ninth International Conference of American States, the establishment of a special annual quota of $0.25 (U. S.) per thousand inhabitants during the years 1948 to 1950, inclusive, for the purpose of meeting expenses of the Committee on the Census of the Americas. This special assessment should be administered in the same manner and on the same basis as the regular annual quota contributed to the Institute.

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40. INVITATION TO HOLD THE SECOND SESSION OF THE IASI IN BOGOTA

The First Session of the Inter American Statistical Institute, assembled in Washington, D. C., September 6-18, 1947,

CONSIDERING:

The desirability of holding further congresses of statisticians of the Western Hemisphere at which they can discuss mutual problems and arrive at satisfactory solutions;

The invitation of Colombia to hold the next such congress in Bogota in the third quarter of 1949,

RESOLVES:

To accept the invitation of Colombia to hold the Second Session of the Inter American Statistical Institute in Bogota in the third quarter of 1949.

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REPORT OF THE SUB-COMMISSION ON STATISTICAL SAMPLING TO THE STATISTICAL COMMISSION OF THE UNITED NATIONS FIRST SESSION 22-27 SEPTEMBER 1947*

INTRODUCTION

1. The Sub-Commission on Statistical Sampling held its first session during the period 22-27 September 1947, with the following members in attendance: Chairman: Mr. P. C. Mahalanobis; Mr. G. Darmois, Mr. W. E. Deming, Mr. F. Yates; Consultant: Mr. R. A. Fisher; Secretariat: Mr. W. J. Bruce (Secretary to Sub-Commission); Mr. W. R. Leonard (Representing the Assistant Secretary-General in charge of Economic Affairs).

2. Representatives for Specialized Agencies were: Mr. R. M. Woodbury (International Labour Organization); Mr. S. V. Arnaldo (United Nations Educational, Scientific and Cultural Organization); Mr. C. Taeuber (Food and Agriculture Organization); Mr. G. E. Hill (World Health Organization) (Interim Commission).

3. The Sub-Commission was fortunate in having in attendance at its meetings Mr. R. G. D. Allen, of the United Kingdom and Mr. N. Keyfitz of Canada who contributed to the discussion on several aspects of sampling in relation to the experience in their countries. Mr. C. Taeuber and Mr. R. M. Woodbury gave valuable help to the Sub-Commission by supplying information on the FAO programme for a world census of agriculture and the ILO plans regarding family budget surveys. Mr. F. Notestein and Mr. C. Pan of the Population Division assisted the Sub-Commission in its discussion of sampling problems of population censuses. Mr. H. W. Singer of the Economic Development Section in the Department of Economic Affairs aided the Sub-Commission in exploring the application of sampling techniques to the data needs of the Sub-Commission on Economic Development. The Sub-Commission wishes to record its appreciation of the valuable assistance which Mr. N. Keyfitz has given in the preparation of this report.

CHAPTER II. TERMS OF REFERENCE

4. The first task with which the Sub-Commission was charged was that of examining its terms of reference with the view toward drafting detailed recommendations to the Statistical Commission. The Sub-Commission had before it a suggested draft of terms of reference (E/CN.3/Sub.1/3). Discussion of the programme of work of the Sub-Commission as well as consideration of specific problems on its agenda enabled the Sub-Commission to formulate the following recommendations as to its terms of reference.

5. The Sub-Commission on Statistical Sampling shall assist the Statistical Commission to:

(a) give special consideration to the use of statistical sampling methods in meeting the actual needs of the United Nations, the specialized agencies and non-governmental organizations brought into consultative status with the United Nations with a view to filling gaps in the information needed by them;

(b) make recommendations regarding the use of sampling methods in conjunction with an attempted complete enumeration in order to assess the reliability of that enumeration, or to obtain early returns and supplementary information;

(c) give special consideration to those circumstances which make sampling methods preferable to complete enumeration in respect to reliability, speed, cost, continuity and other factors;

(d) examine the use which is being made of statistical sampling in different countries and in different fields of subject-matter;

(e) promote the improvement of methodology in statistical sampling and its applications.

CHAPTER III. GENERAL RECOMMENDATIONS

6. The Sub-Commission has been asked "to examine the possibility of using sampling methods to assess the reliability of complete enumeration," and "to give special consideration to those fields in which sampling methods are to be preferred to complete enumeration." The Sub-Commission is of the opinion that this is a continuing task to which it will give periodic appraisals. The Sub-Commission made a general review of the use of sampling methods in Canada, India, the United Kingdom, and the United States of America as far as these were known to members present, and felt that sufficient advance in the theory and practice of sample surveys had been achieved in recent years to enable the Sub-Commission to make certain general observations.

7. Experience in sampling work done on an extensive scale in Canada, India, United

* United Nations Economic and Social Council release, E/CN.3/37, 21 October 1947.

Kingdom, and United States of America show that the sampling method, when properly carried out, can be relief upon to furnish results with an accuracy fitted to the requirements of the problem for many, if not most practical purposes. In extensive countries like India or the United States of America, a very small sample such as one per cent of the total coverage, properly planned, will give much important census information. The staff required for such sample surveys would be a small fraction, possibly a thirtieth or a twentieth of the staff required for complete censuses, while the cost, according to experience in several countries, will run to about only a fifteenth or a twentieth as much. Sample surveys are also usually much speedier in operation.

8. Because of the possibility of employing a much smaller and hence better selected and more highly trained staff in the sample survey, it is possible to obtain information of higher quality and of a kind which it is practically impossible to obtain by the large staff usually required for a complete enumeration. For the same reason, the results of a sample survey are often more accurate than those obtained by an attempted complete enumeration. In fact, the Sub-Commission was impressed by evidence presented which showed that there was serious under- or over-estimation even to the extent of from ten to thirty per cent in the results of attempted complete censuses in comparison with estimates obtained by the sampling method and subsequently investigated by careful independent enquiries.

9. The accuracy of an attempted complete enumeration can be assessed only by an independent check, usually involving a sampling procedure. In every properly designed sample survey it is usually possible to calculate a valid estimate of sampling error. This is a most important feature of the sampling method. In many situations the sampling error can be approximately calculated in advance, which enables a survey to be fitted to the accuracy required in specific cases and enables reasonable compromises to be made between the desired accuracy and permissible cost.

10. In properly designed sample surveys it is possible to combine different kinds of enquiries (for example, agricultural and population censuses) in the same survey. This not only reduces over-all costs, but often supplies certain items of information (such as per capita production of food and measures of the precision of the estimates) which would not otherwise be available.

11. Because of its much lower cost, it is possible to repeat a sample survey at frequent intervals and in this way to obtain up-to-date and reliable information about changing conditions and trends.

12. Provided the necessary trained staff is available, it is always possible to carry out an efficient sample survey in any situation in which a complete enumeration can be attempted with reasonable prospects of success. In many situations in which a complete enumeration cannot be made, or if attempted, is almost certain to give unreliable results on account of the lack of necessary physical facilities or lack of capable personnel, it is possible to carry out a sample survey with considerable success.

13. Sampling can be used with great advantage in speed and economy in tabulating and processing the material collected by a complete enumeration or even by a sample survey. By the use of interpenetrating networks of samples it is possible when desired to study simultaneously variations in results arising from different interviewers, different ways of presenting the questions, different systems of training interviewers, etc., and to eliminate such variations in the comparisons required. Through the proper use of sampling procedures, interpenetrating samples can be used also for the above purposes even in a complete enumeration.

14. For these reasons, the Sub-Commission makes the following recommendations:

(a) It is advisable to consider the desirability of carrying out a sample survey in conjunction with any attempted complete census (especially in the fields of agricultural and population enquiries) with a view, (i) to assessing the margin of error, comparative speed, cost and convenience of organization, and (ii) to obtaining supplementary information. The cost of such sample surveys will usually be relatively very small.

(b) It is desirable to make a sample survey instead of attempting a complete enumeration whenever adequate funds, physical facilities, or personnel of sufficient ability are inadequate for a complete enumeration.

(c) It is sometimes desirable to use the same basic sampling structure for different types of statistics. It is also sometimes possible to collect information required in different enquiries simultaneously, although the extent to which this can be done is limited by the demands that can be made on the interviewers and respondents, and, by the fact that different types of surveys may require different interviewers of different technical qualifications.

(d) It is often advantageous to carry out a series of repeated sample surveys at short intervals along with or even instead of a complete census at long intervals. In such a series of repeated surveys, it will usually be possible to make appreciable improvements in the sampling technique and thus reduce over-all costs as well as to

obtain more detailed information and information of better quality with the progress of time.

(e) All these recommendations are subject to this most important provision: a sample survey should be carried out only under the technical guidance of professional statisticians not only with adequate knowledge of sampling theory but also with actual experience in sampling practice, and with the help of a properly trained field and computing staff.

15. There is an acute shortage of such trained and experienced workers. In fact, the Sub-Commission is of the opinion that the lack of trained personnel at the present time constitutes the real obstacle to a rapid expansion in the application of sampling methods. The Sub-Commission believes that very serious consideration must be given to ways and means of providing training in statistical sampling. Certain recommendations have been made in subsequent chapters in this regard with specific reference to the FAO proposal for a 1950 World Census of Agriculture, but the general problem requires early and more detailed attention.

CHAPTER IV. SAMPLING IN THE 1950 WORLD CENSUS OF AGRICULTURE

16. The Food and Agriculture Organization has requested the advice and assistance of the Sub-Commission regarding the applicability of sampling methods to the collection of agricultural data. The FAO is especially interested to ascertain whether and how far sampling may be used with advantage in the proposed 1950 World Census of Agriculture.

17. The FAO has already suggested that where a complete enumeration is not feasible, it will be desirable to use the sampling method to obtain as much information as possible. The FAO contemplates the establishment of training centers in different parts of the world to provide preliminary training to executive officers who will later have considerable responsibility for organizing the 1950 censuses in their respective countries. It is believed that the intention is to send officers for training who are of comparatively senior standing with considerable experience in agricultural statistics. Because sampling methods are recommended by the Sub-Commission, the FAO will wish to have its advice about training in sampling methods.

18. Preliminary discussion by the FAO with Governments indicates that some countries will be unable to make a complete enumeration in 1950, but might be willing to make sample surveys. In countries which are prepared to undertake a complete enumeration, the FAO wants to know whether and how sampling methods can be used to check the reliability of the complete enumeration, and to secure supplementary information. Advice is also sought regarding the application of sampling procedures in the tabulation processes.

19. Consideration was given by the Sub-Commission to information relating to a number of different countries. For example Siam which conducted an agricultural census in 1947; might find it possible to use the results of this census as a foundation for organizing an efficient sample survey. In India, detailed large scale maps showing the boundaries of individual holdings are available for certain regions; and detailed reports of crop acreages are prepared for revenue purposes every year by village officials in other regions. Such maps or reports can be utilized for sampling purposes. Provincial maps are available for China and it is believed that hsien boundaries can be demarcated. Maps already exist for a number of hsien and fairly detailed maps exist for about fifty cities. It is possible that with the co-operation of the military authorities adequate maps can be made available for sampling. *Ad hoc* methods would doubtless need to be devised in areas where the maps or lists are either faulty or lacking altogether, but the possibilities of fairly efficient sampling for both population and agriculture appear to be good. Sample censuses of agriculture have already been made in the United States of America on a nation-wide scale, and in India in certain regions. In many countries periodic returns relating to agriculture are obtained from all farms as a matter of routine.

20. In considering such information, the Sub-Commission classified the different countries into three broad groups: first, countries in which it will not be possible to undertake a complete enumeration but which might be willing to make a sample survey; second, countries which it is possible to undertake a complete enumeration but only on a scale inadequate to supply the minimum list of data requested; third, countries which have a good deal of experience in agricultural censuses or which have in use extensive arrangements for the collection of statistical data.

Sampling Where Complete Enumeration Is Unwise

21. Some of the countries in the first group may possess physical equipment such as maps or lists of holdings, which will provide a suitable foundation for organizing efficient sample surveys. In such countries the amount and quality of information which can be collected by the sampling method will depend mainly on the type of field staff employed,

availability of funds, etc. In other countries in the first group maps and lists of holdings may not be detailed or may not exist at all, in which case *ad hoc* methods will have to be devised for sampling purposes. Under such circumstances any attempt at a complete coverage would be difficult if not futile. At the same time, it is probable on the basis of related experience, that satisfactory sampling methods can be devised, which would produce statistics adequate for many purposes as well as measures of the precision actually attained.

22. One device is to prepare large-scale and detailed maps only for the areas drawn into the sample. With the help of such maps the necessary data could be collected either by complete enumeration or by sub-sampling within the sample areas. The use of aerial photographs is extremely helpful.

23. In the first group of countries which will not undertake a complete census the sampling method appears to be the only one which can furnish the information requested by FAO.

Sampling to Supplement Complete Enumeration

24. In the second group of countries in which a complete census is to be attempted, a sample survey can be superimposed on the framework of the complete enumeration. The Sub-Commission recommends, therefore, that a sample survey be made either independently or concurrently with the attempted complete census. The sample survey will then furnish valuable information regarding the margin of error of the complete enumeration and may also secure supplementary information.

25. In the third group of countries, with a great deal of experience of complete censuses, the sample survey will be useful in furnishing supplementary information, early returns, and valid measures of the margin of error of the complete enumeration. In a country like the United Kingdom some of the information required by the FAO is collected in the routine periodic surveys, and is known to be of high quality. In such countries, also, it will be convenient and economical to use the sample survey to obtain supplementary information to satisfy the FAO requests.

26. The Sub-Commission is thus agreed that sample surveys would be useful in different ways in different groups of countries, and recommends in principle that attempts should be made to carry out properly planned sample surveys in as many countries as possible as an integral part of the programme for the World Census of Agriculture in 1950.

27. The Sub-Commission must again emphasize the fact that a scientific sample survey can be designed and carried out only under the direction of qualified statisticians possessing knowledge of requisite theory and experience in the conduct of sampling surveys. Moreover a properly trained staff of field investigators and computers is also necessary. The Sub-Commission feels that unless the work is done in accordance with correct theoretical principles and with the help of an adequately trained staff, the results of a sample survey may be highly misleading. The only safeguard against the misuse or abuse of sampling methods is to insist on the work being handled with competence.

28. Unfortunately, there is an acute world shortage of trained personnel at the present time. The Sub-Commission is therefore of the opinion that it is absolutely essential to provide training in statistical sampling to a sufficient number of persons if the sampling method is to be extended to countries where this method is not being used at present.

29. The Sub-Commission has given consideration to the kind of *ad hoc* training which needs to be provided to enable sampling methods to be used effectively in the 1950 World Census of Agriculture. The trainees should be responsible administrative officers, preferably with experience in statistical work or knowledge of mathematical statistics, who will be in executive charge of the work in their respective countries. The Sub-Commission is of opinion that each country desiring to undertake a sampling survey in 1950 should send at least two such officers for training and that the number may very well be larger for extensive countries like China or India.

30. The Sub-Commission notes that a great deal of work has been done and considerable experience with sample surveys gained in the United States of America, the United Kingdom, and India. The Sub-Commission made a general survey of facilities likely to be available for training purposes, and is of the opinion that in case the governments and institutions concerned are agreeable, it will be possible to give *ad hoc* training in sampling methods to about 200 people. For example, the United States of America can take care of the training needs of the Western Hemisphere and possibly of some other countries. India can provide the training for the Far Eastern countries. The United Kingdom can give theoretical training to trainees from British tropical Africa and possibly from some other countries. There is also a possibility of organizing a training center for theory in France which has a number of distinguished mathematical statisticians.

31. The training programme should be primarily practical in nature, should include a background of theoretical principles, and should cover questions of organizational procedure, training of the field investigators and computers, and methods of mechanical or hand

tabulation. A period of intensive training of four months is considered to be the minimum necessary. The training should be given to groups in the form of organized courses.

32. After the basic course of four months is completed, it will be desirable that the trainees go back to their own countries and organize pilot surveys on a small scale with a view to trying out different methods and procedures, obtaining basic information required for preparing an efficient design of the final survey, and the training of the field and computing staff. The Sub-Commission lays great emphasis on the need for undertaking at least one such pilot survey before plans are finalized for sample surveys in 1950.

33. In preparing the design of such pilot surveys, it is essential that the trainees should then receive additional technical guidance from persons experienced in sample surveys. It will be extremely useful if all or some of the trainees can go back to their respective training centers for a further period of work of two or three months.

34. The Sub-Commission is of the opinion that besides the training scheme visualized here, it is necessary to provide a certain amount of expert help in the way of personal visits to some of the countries concerned by competent professional statisticians with actual experience in sample surveys. This can be accomplished in the immediate future by arranging for short visits by statisticians working in other places, the expenses for such visits to be met by mutual arrangement between the parties concerned. It is desirable to have a small permanent staff of sampling experts whose services can be made available for field service for short periods to countries in need of assistance.

35. Visits from experts even for short periods will assist administrative authorities in making decisions on matters of principle and will also assist the statisticians on the spot in making technical decisions. The Sub-Commission attaches great importance to the provision of a field service, and recommends that the United Nations and the FAO should in due course take necessary action in this matter.

36. The Sub-Commission is of the opinion that although potential training resources may be adequate, the time factor is most important. It is essential that a concrete plan should be prepared at a very early date and necessary action taken with a view to starting training courses early in 1948.

37. The Sub-Commission thinks it advisable to utilize about one year (1948) for training along the lines indicated in paragraphs 29-33 above. In 1949 the trainees should be actively engaged in preparing the design of the sample survey, constructing the sample framework, recruiting and training the field and computing staff, and in planning and executing pilot surveys. The Sub-Commission believes that it is only in this way that a sound foundation can be laid for the successful execution of efficient sample surveys in 1950.

38. The Sub-Commission is of the opinion that efforts in training should be treated as a part of a long-range policy. Sampling organizations which are established for the 1950 World Census of Agriculture should not be terminated after the first operation, but should be established on a more permanent basis for carrying out repeated annual (or even more frequent) surveys. The scope of work of such sampling organizations should be gradually extended to cover fields other than agriculture so that these organizations can supply a continuous stream of up to date and reliable information for various research and administrative purposes. The formulation of at least a three-year programme for such sampling organizations in different countries will mean a definite advance in the improvement of world statistics.

39. Both for the immediate purpose of the 1950 censuses and for longer range interests, the preparation of a manual by which the Sub-Commission could promote the acceptance of sound principles of sampling and their application to specific survey problems is thought desirable. It was decided to proceed with the preparation of a manual specifically dealing with agricultural sample surveys. Such a manual would be quite distinct from a textbook; it would deal less with theory than with examples taken from sample surveys actually carried out. The subject was discussed in considerable detail, and Dr. F. Yates kindly agreed to prepare a draft manual for consideration by the Sub-Commission and Dr. W. E. Deming and Prof. P. C. Mahalanobis agreed to help with information relating to large scale sample surveys in the United States of America and India.

40. The 1950 World Census of Agriculture represents one of the important problems placed before the Sub-Commission. The Sub-Commission stands ready to offer advice and technical assistance in every possible way.

CHAPTER V. SAMPLING FOR POPULATION CHARACTERISTICS

41. Countries which in recent years have not had population counts are concerned about the lack of statistics on their human resources, and are casting about for means to obtain such information. The Sub-Commission recognizes that in many instances the surveys conducted to furnish such information would have to take place under difficult conditions, and that the problems of physical materials, personnel, and financing, either for a complete count or for a sample survey, are serious. There is urgent need of information

on many aspects of population for the parts of the world which are statistically less well developed, and the Sub-Commission is concerned that the resources which can be applied to obtain information are used as efficiently as possible.

42. The Sub-Commission intends to follow closely the work which is being done, and will recommend at later sessions the specific types of surveys and the circumstances under which sampling should be used. Special attention will be given to such factors as relative cost and speed, as well as continuity and improved quality of data.

43. In the meantime it wishes to note on the basis of evidence presented by members, that circumstances frequently occur in which a sample will give more accurate information than an attempted complete count. There are identifiable circumstances in which a sample can be safely carried out where an attempted complete count would offer serious risks. In this consideration the Sub-Commission had in mind particularly countries of extensive land area and imperfectly developed statistical systems. In such circumstances a serious waste of scarce statistical resources might be involved in an attempted complete enumeration. The difficulty of obtaining accurate statistics on many population characteristics such as counts of males in military age-groups, is perhaps more serious than the sampling problem by itself, and this fact points to the probable futility of trying to carry out a complete count in the absence of a sufficient number of adequately trained interviewers. By the sampling method, a smaller number of specially trained interviewers can be used with the presumption that more accurate statistics will be obtained. In fact the size of sample should probably be limited to the number of good interviewers that can be properly prepared for the work that they are to perform.

44. The Sub-Commission also considers that sampling has an even more important part to play in the determination of the detailed characteristics, demographic, sociological, and economic, of human population than it may have in the preparation of estimates of total population. Many of these characteristics are of the greatest scientific and practical importance, and data on them are often required with greater accuracy than that expected in the complete counts.

45. There will be many countries in which a complete count of the population by the ordinary methods is administratively possible, and is believed to be capable of attaining the required accuracy, but in which the use of sampling methods is likely to be required in order to obtain any reliable information on the detailed characteristics of the population.

46. It is clear that the "Standard Minimum List of Subjects Proposed for the 1950 Censuses of Population" proposed by the Population Commission in its report of the Second Session (E/57I, 29 August 1947, Annex II) and even more the "Supplementary List" (Annex III) will require a census questionnaire which in many countries can only be accurately completed for a sample of individuals and households by trained investigators. Sampling will consequently be a necessity in such countries if any statistics of known value are to be obtained.

47. Even in the most advanced countries the use of sampling for the separate ascertainment of much of the more detailed information will result not only in considerable economies, but also, because of the possibility of utilizing more skilled and better trained investigators, in greatly improved quality of information.

48. Having regard to the economies which can be secured when a single administrative establishment and a single visit of enumerators to households can be applied to obtaining several kinds of information, the Sub-Commission recommends that those countries with large rural populations consider the combining of agricultural and population censuses. In general this procedure is economical whether sample or complete censuses are taken.

49. The place of a complete census among the various frameworks for the purpose of planning sample surveys was considered. Simple censuses, asking but few questions, will perhaps always constitute the best basis for sample design. Their utility for this purpose is not appreciably diminished by even a substantial amount of error.

50. The Sub-Commission requests the Secretary-General to collect information on the use of sampling methods in population censuses throughout the world. This material when collected will be circulated among the members of the Sub-Commission for discussion at later meetings.

CHAPTER VI. SAMPLING METHODS IN FAMILY BUDGET INQUIRIES

51. The International Labour Office is concerned with methods of conducting family budget surveys and has requested the advice of the Sub-Commission on the matter. Many countries are considering undertaking large-scale surveys for determining the weights for cost of living indexes and for studying changes in patterns of consumption for other purposes. A complete count is impracticable in family budgets and similar surveys. It is of vital importance that sound sampling methods should be used in this field.

52. In the view of the Sub-Commission, some very important recommendations can be made in regard to sampling for the study of family budgets. Such sampling should be

conducted by a procedure that will give small bias and calculable errors of sampling. In budget studies, the definition of the universe amounts to defining areas as well as to defining a particular type of family (i.e., by income, number of children, type of worker, occupation, etc.) and, there is great difficulty in laying down specifications by which a particular family, dissociated from its domicile, can be recognized as in or out of the universe.

53. Once the definitions are clarified, there are certain recognized rules of sampling that should be followed for selecting the households that are to be surveyed. These rules must be determined to suit the requirements of each specific case. The theoretical basis for several possible plans has been worked out and the statistician will apply whichever plan appears to be most appropriate. Among sampling methods which provide estimates of error, some are more efficient than others. The theory of experimental design aids in devising that way of laying out the survey which will secure the information desired at minimum cost. The physical materials available such as maps and lists, and previous information will determine the optimum design.

54. The procedure of selection and estimation, if properly carried out, will permit an evaluation of the sampling error. But evaluation of the sampling error is impossible unless there is complete control of the operation through all of the stages of enumeration and tabulation. For this reason and because it is possible only to define some of the problems and procedures by examples, it is necessary that the planning and execution of the survey be conducted under the guidance of a competent mathematical statistician. This point has been previously emphasized in the general recommendations (Chapter III).

55. Surveys are subject to many different types of error other than the sampling error. The method of interpenetrating networks of samples, as already indicated in Chapter III, is particularly useful for evaluating errors arising from different sources.

56. The Sub-Commission, considering that the proper use of statistics is only possible with knowledge of the errors in the information, strongly recommends that publications of family budget survey results be accompanied by statements of the errors to which they are subject. When this is not possible because of the lack of an appropriate sample design for the respondents, a statement to this effect is essential.

57. The Sub-Commission recommends also that where it is feasible to carry out the survey, possibly on a smaller scale, but with periodic repetition, it is advantageous to do so. In any case it is most inadvisable to conduct a single large survey without preliminary preparation in the form of pilot studies, through which knowledge necessary for the design of an efficient sample can be gained, questionnaires tried out, and interviewers trained.

58. In addition to the problem of selection of respondents, there are other aspects of family budget surveys in which the use of sampling is the only means by which effective decisions may be made, such as determining the frequency of the family budget surveys. Such matters can only be decided after properly designed and interpreted experiments have been made, and the Sub-Commission considers that the making and immediate publication of such experiments is to be strongly encouraged.

59. In order that the Sub-Commission itself may give more specific help on these points, it requests that information from various countries be compiled on the following points:

(1) Methods now in use for selection of respondents, size and kind of sample.

(2) Sampling aspects of current methods, including length of survey period, frequency of surveys, methods of establishing interviewer error, etc.

(3) Study of the dispersion and reliability of price quotations.

(4) Methods used in calculating the sampling error of indexes of price, cost of living, etc.

(5) Contemplated projects in the field.

CHAPTER VII. APPRAISAL OF SAMPLING METHODS

60. One of the important tasks assigned to the Sub-Commission is to examine the use which is being made of sampling methods in different fields in different countries. It will be necessary to collect relevant material from all over the world. The Sub-Commission requests that this work be taken in hand by the Statistical Office immediately.

61. The Sub-Commission feels that it is necessary to develop standard definitions of sampling terminology, notation, and reporting in the field of statistical sampling without which the comparison of technical methods will be difficult or even impossible. The Sub-Commission requests that a memorandum be prepared on this subject for consideration at the next session of the Sub-Commission. It is agreed that members of the Sub-Commission will assist in this project.

62. The Sub-Commission believes that it will be of great help if some contact can be established with workers in the field of statistical sampling in different countries. Such workers can supply valuable information relating to advances in sampling methods in their own special fields and make suggestions and comments for the consideration of the

Sub-Commission. Bringing such workers in touch with United Nations will also be of value in fostering the spirit of co-operation and co-ordinated effort in the sampling field. The Sub-Commission, therefore, requests the Statistical Office to establish contacts with experts in the field of statistical sampling in the various countries with a view to obtaining comments and information on current sampling projects.

CHAPTER VIII. OTHER ITEMS

National Income

63. The Sub-Commission notes the important work being done in many countries in the field of national income and expenditure, and more generally regarding the construction of social accounts. At the request of the Statistical Commission the Sub-Commission has considered the way in which sampling will permit of improved work in such fields. It was pointed out that the measurement of national income with a sufficient degree of accuracy often involves the collection of material which can only be successfully obtained by sampling methods. Examples are the estimation of the aggregate of all incomes below tax exemption limits, the estimation of average profit margins in the retail trades, of incomes in the professions, etc., subjects which cannot easily be covered by a complete enumeration.

64. The Sub-Commission requires a clarification of concepts in order that the sampling problems might be clearly defined. It asks for more detailed information on the kind and types of items to be included in national income compilations, for consideration at later sessions when more specific advice might be given.

Sampling in Relation to Economic Planning

65. The Sub-Commission on Statistical Sampling was informed that the Sub-Commission on Economic Development is interested to receive advice in connection with plans for the development of a number of countries. The Sub-Commission on Statistical Sampling is of opinion that the sampling method will be useful if it can be put into operation in collecting basic data for the preparation of such plans. The Sub-Commission points out that in view of the urgency of developmental needs, the sampling method will be particularly appropriate as it will provide data with greatest speed. The Sub-Commission requests, however, more detailed information on the types of data needed for planning purposes, and requests that a memorandum on this subject be prepared for consideration at the next session of the Sub-Commission.

66. The sampling method may also be used with advantage in assessing the actual progress made in executing the plans, and in studying the comparative efficiency of different methods of developmental approach in specific cases. The Sub-Commission is prepared to consider this problem in relation to specific cases and to offer technical advice.

Demonstration Sample Census

67. It has been suggested to the Sub-Commission that prior to the world censuses of 1950 and in fact in time to serve as a model in the preparation of these censuses, a demonstration of sampling should be carried out in some country in which grave difficulties in sampling are likely to be met. Such an experiment might be carried out in a small country and statistics obtained for the country as a whole. On the other hand, it might be preferable to conduct the experiment in one or two provinces in some large country which presents not only difficult problems of sampling but considerable interest as well. Any of several countries might volunteer to offer hospitality to such a project.

68. The experiment would serve a number of purposes. First, it would provide a demonstration to show how sampling can be carried out in difficult and widely varying conditions; second, it would serve as a training-ground on which census employees from other countries could have actual field experience under competent leadership. Third, it would, moreover, give figures on actual costs.

An Introductory Pamphlet on Sampling

69. The Sub-Commission has taken up the problem of the spread of information on sampling amongst official statisticians. It is unlikely that all officials engaged in the collection of statistical data will require detailed knowledge of the technique and theory. On the other hand, it is vital that all who have any part in decisions on the execution of surveys should have a clear notion of what sampling can and cannot do. For this purpose Dr. W. E. Deming has prepared a statement on the uses of sampling in censuses of population, agriculture, public health, and commerce. The Sub-Commission states that the statement represents its views, and wishes it to have the widest circulation. It recommends that it be made available immediately in the five official languages of the United Nations, and sent to administrative officers engaged in the collection of statistical materials.

INSTITUTE AFFAIRS—ACTIVIDADES DEL INSTITUTO

(Source: Secretariat—Fuente: Oficina Permanente)

REVISION OF IASI STATUTES

The revised Statutes of the IASI, the Spanish text of which is given on the following pages, have now been favorably voted on by the constituent membership of the IASI and are in effect.

The proposal for revision of the Statutes was formulated from suggestions of the members accumulated over a considerable period of time. It was approved by the Executive Committee of the IASI at the Washington meeting on September 7, 1947, and was then discussed in the First General Assembly of constituent members on September 18. At that time, various modifications were made by the Assembly. The proposal, as amended, was then mailed to the constituent members on November 15, 1947, with a request for a mail vote.

The Secretariat received 51 ballots, 49 of which were in favor of the amendments as proposed without reservations. The count of the ballots was duly verified on March 8, 1948. Since more than two-thirds of the constituent members voted and more than two-thirds of the votes were affirmative, as required for adoption, the revised Statutes were declared in effect as of March 8, 1948.

The English text of the Statutes will be published in *Estadística* No. 19.

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REFORMA DE LOS ESTATUTOS DEL IASI

Los miembros titulares del IASI han aceptado, y en consecuencia se hallan vigentes, los Estatutos revisados del IASI, cuyo texto español puede verse en las páginas que siguen.

La propuesta de revisión de los Estatutos fué formulada con base en las sugerencias de los miembros, acumuladas durante un largo período de tiempo. Fueron aprobadas por el Comité Ejecutivo del IASI en su reunión de Wáshington, el 7 de septiembre de 1947, y después, fueron consideradas en la Primera Asamblea General de los miembros titulares, el 18 de septiembre. En esa ocasión la Asamblea introdujo varias modificaciones. Una vez corregida la propuesta, el 15 de noviembre de 1947, fué enviada por correo a los miembros titulares, solicitándoles su voto postal al respecto.

La Oficina Permanente recibió 51 votos, de los cuales 49 resultaron, sin ninguna reserva, favorables a las enmiendas propuestas.

El escrutinio fué realizado debidamente el día 8 de marzo de 1948. Puesto que más de los ⅔ de los miembros titulares votaron y más de los ⅔ de los votos fueron afirmativos, tal como se requería para que las reformas se adoptasen, los nuevos Estatutos fueron declarados vigentes, a partir del 8 de marzo de 1948.

El texto inglés de los Estatutos aparecerá en el No. 19 de *Estadística*.

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ESTATUTOS DEL INSTITUTO INTERAMERICANO DE ESTADISTICA*

Artículo I—Finalidades

1. El Instituto Interamericano de Estadística es un organismo profesional cuyo principal objeto es fomentar el desarrollo de la estadística en el Hemisferio Occidental. Los propósitos que persigue son: (a) Estimular el perfeccionamiento de la metodología en la compilación, tabulación, análisis y publicación de estadísticas tanto oficiales como extraoficiales; (b) promover el empleo de medidas que tiendan a mejorar la comparabilidad y el aprovechamiento de las estadísticas económicas y sociales entre las naciones de este hemisferio; (c) proporcionar un medio para la colaboración estadística entre los estadísticos de este hemisferio; y (d) cooperar con organismos nacionales e internacionales, especialmente con el Instituto Internacional de Estadística, al progreso de la ciencia y administración de la estadística.

Artículo II—Miembros

1. Podrán ser miembros del Instituto tanto individuos como organismos, según se establece en las secciones 2 y 3, respectivamente, de este artículo.

2. Los miembros individuales deberán ser ciudadanos o residentes de los países del Hemisferio Occidental, y serán de dos clases: Titulares y ex officio.

(a) Los miembros titulares serán personas distinguidas por sus condiciones profesionales y por sus contribuciones a la ciencia estadística y al desarrollo de la estadística en el Hemisferio Occidental, y serán elegidos de acuerdo con lo dispuesto en la sección 4 de este artículo. Los miembros titulares lo serán por un plazo indefinido pero podrán terminar sus funciones mediante renuncia. A discreción del Comité Ejecutivo, la falta de pago durante dos años consecutivos de las cuotas señaladas en la sección 1 del artículo VIII se considerará como una forma de renuncia. El número total de miembros de cualquier país no pasará de 15. En el caso de ciudadanos de naciones del Hemisferio Occidental, el país de ciudadanía regirá en la determinación del país por el cual se es miembro; los miembros del IASI residentes en el Hemisferio Occidental que sean ciudadanos de naciones no pertenecientes al mismo, no serán asignados a las cuotas nacionales.

(b) Los miembros ex officio serán personas que ocupen ciertos puestos directivos en oficinas de estadística o que tengan ciertas capacidades representativas, según se dispone en las secciones 3 (c), 3 (d), y 6 de este artículo. Los miembros ex officio no pagarán cuota alguna y actuarán como tales sólo mientras ocupen sus puestos respectivos o continúen en sus capacidades representativas de las cuales derivan su calidad de miembro. El hecho de que una persona sea miembro ex officio no constituirá impedimento alguno para que sea elegida miembro titular.

Los miembros ex officio tendrán los mismos derechos de los miembros titulares con respecto a la participación en todas las actividades del Instituto y en la votación sobre éllas, con la excepción de proponer y elegir los nuevos miembros titulares, ser electos para miembros del Comité Ejecutivo, y votar sobre las enmiendas a los Estatutos. Si un miembro es al mismo tiempo titular y ex officio, tendrá el privilegio de votar solo en una de sus condiciones.

3. Los miembros corporativos (gobiernos u otros organismos) serán de tres clases: Adherentes, afiliados, y auspiciadores.

* En caso de que surja alguna duda se considerará el texto inglés como original.

(a) El gobierno de cualquier nación del Hemisferio Occidental podrá hacerse miembro adherente, previo pago de la cuota estipulada en la sección 2 del artículo VIII.

(b) Cualquier agencia, institución, organismo u oficina, oficial o extraoficial, en el Hemisferio Occidental que se ocupe de trabajos de estadística o que tenga intereses de carácter estadístico podrá, previa la aprobación del Comité Ejecutivo del Instituto, hacerse miembro afiliado pagando la cuota establecida en la sección 3 del artículo VIII.

(c) Previa la aprobación del Comité Ejecutivo, cualquier institución, empresa de negocios o individuo en el Hemisferio Occidental puede llegar a ser un miembro auspiciador del Instituto con la condición de pagar una contribución tal como se prescribe en la sección 4 del artículo VIII.

(d) Cada miembro corporativo tendrá derecho a designar un representante como miembro ex officio. Los miembros corporativos pueden dejar de serlo retirando su adhesión, afiliación o auspicio. A discreción del Comité Ejecutivo, la falta de pago de la cuota correspondiente durante dos años consecutivos se considerará como una forma de retiro.

4. Los miembros titulares serán elegidos por los votos de los miembros titulares del Instituto, encargándose el secretario general de obtener la votación por correspondencia. Las elecciones para miembros titulares tendrán lugar dentro de los seis meses siguientes a cada sesión del Instituto y dentro de los seis meses siguientes a la terminación de cualquier período de tres años en el que no se haya celebrado una de tales sesiones. Para ser elegido serán menester las dos terceras partes de todos los votos emitidos; siempre que no menos del 50 por ciento del total de los miembros haya participado en la votación, y siempre que, además, si el número de candidatos que recibieron dos terceras partes o más de los votos emitidos excediere en cualquier caso del número de vacantes que corresponde llenar, el candidato o candidatos que recibieren los mayores números de votos sobre las dos terceras partes se considerarán electos para llenar la vacante o vacantes que existieren.

5. Las proposiciones de candidatos para la elección de miembros titulares serán solicitadas por el secretario general, debiendo cada una de ellas hacerse por escrito con las firmas de al menos tres miembros titulares. Cada proposición deberá ir acompañada de una relación detallada sobre las condiciones y competencia de la persona propuesta. Luego que haya vencido el plazo para hacer las designaciones, el secretario general enviará a cada uno de los miembros la nómina de candidatos con una relación de sus méritos, una boleta en blanco para votar, un sobre en el que se colocará la boleta una vez marcada y será luego sellado, y un aviso sobre la última fecha en que se aceptarán las votaciones. Ni la boleta ni el sobre sellado en que aquella previamente se coloque deberán marcarse en tal forma que se descubra la identidad del miembro votante. Cada sobre que vaya sin identificación y que contenga la boleta marcada se transmitirá al secretario general en un segundo sobre el cual llevará en la parte de afuera la firma del miembro votante. Los sobres no identificados que contengan los votos se separarán de los sobres identificados luego que lleguen a su destino, y se abrirán y contarán al cerrarse el período dentro del cual pueden recibirse. Los resultados de cada elección se comunicarán a los miembros dentro de los dos meses siguientes al día en que se haya cerrado la votación.

6. El secretario general deberá averiguar de los gobiernos respectivos cual es el principal puesto de estadística en cada nación del Hemisferio Occidental y la persona que lo ocupe se considerará como miembro ex officio del Instituto. Además, la Unión Panamericana tendrá derecho a designar

un representante como miembro ex officio; y, a discreción del Comité Ejecutivo y con sujeción a las condiciones que éste estipule, podrá nombrarse un miembro ex officio por cualquier otro organismo o comisión que se ocupe parcial o enteramente en trabajos de estadística, a fin de incrementar la coordinación de los estudios estadísticos llevados a cabo en este hemisferio.

Artículo III—Reuniones

El Instituto celebrará sesiones al mismo tiempo y en el mismo lugar en que se reúna el Congreso Científico Americano y en las otras fechas y lugares que decida el Comité Ejecutivo. Las reuniones administrativas que tengan lugar en tales sesiones se conocerán como la Asamblea General y estarán abiertas a todos los miembros titulares y ex officio del Instituto.

Artículo IV—Funcionarios

1. Al clausurarse cada sesión la Asamblea General elegirá de entre los miembros titulares, un presidente, un primer, segundo, tercero y cuarto vicepresidentes, todos los cuales prestarán sus servicios sin remuneración alguna. Estos funcionarios integrarán el Comité Ejecutivo del Instituto, y desempeñarán su cargo hasta que sean elegidos sus sucesores. No podrá elegirse de cualquiera de las naciones más de un miembro para el Comité Ejecutivo; ni podrá tampoco elegirse miembro alguno del Comité Ejecutivo de una nación cualquiera que no sea miembro adherente del Instituto.

2. Los miembros del Comité Ejecutivo no podrán ser elegidos sucesivamente para más de dos períodos de ejercicio.

3. En caso de fallecimiento o renuncia de algún miembro del Comité Ejecutivo, los restantes miembros elegirán un miembro titular para ocupar el cargo durante el período no vencido..

Artículo V—Organización y Deberes de los Funcionarios

1. La dirección del Instituto corresponderá a la Asamblea General durante cualquier sesión y, en el ínterin entre sesiones del Instituto, al Comité Ejecutivo. Todas las cuestiones que se presenten ante la Asamblea General serán resueltas por los votos de los miembros presentes, según lo estipulado en el artículo II 2 (b) respecto al derecho a voto de los miembros ex officio.

2. Corresponderá al Comité Ejecutivo: Elegir al secretario general del Instituto y determinar su remuneración; administrar los asuntos del Instituto; vigilar sus ingresos y gastos; encargarse de sus publicaciones; designar en cada reunión un comité de miembros titulares, de los cuales ninguno será miembro del Comité Ejecutivo, para proponer funcionarios del Instituto; y establecer comités, por su propia iniciativa o por mandato de la Asamblea General, para estudiar cuestiones de carácter técnico o administrativo relacionadas con la estadística. A su discreción y en ocasiones excepcionales, podrá dispensar honores y crear puestos honorarios. En cada sesión del Instituto, el Comité Ejecutivo informará a la Asamblea General respecto a las actividades que aquél haya desempeñado en el intervalo. El Comité Ejecutivo preparará el programa de las reuniones del Instituto en colaboración con comités locales consultivos.

3. El presidente presidirá en las sesiones del Comité Ejecutivo y en las sesiones del Instituto, y presentará a la Asamblea General el informe de dicho Comité. En caso de que se presentare un asunto de emergencia que requiera alguna acción inmediata mientras el Comité Ejecutivo no estuviere en sesión, el Presidente podrá actuar en nombre de dicho Comité, pero deberá

informar inmediatamente a los otros miembros del mismo acerca de las medidas que haya tomado. El presidente puede, en caso de circunstancias excepcionales y en interés de las conveniencias administrativas, designar otro miembro del Comité Ejecutivo para que actúe en su nombre como presidente.

4. El secretario general asistirá a todas las sesiones del Comité Ejecutivo y del Instituto, y, bajo la dirección del Comité, se encargará de la redacción y publicación del informe de cada sesión. Se encargará de las oficinas del Instituto, nombrará a los ayudantes que sean necesarios, previa autorización del Comité Ejecutivo cuidará de los archivos y de la correspondencia, y llevará a efecto las instrucciones del Instituto.

5. El secretario general estará a cargo de las finanzas del Instituto e informará anualmente y en la reunión de apertura de cada sesión, siendo luego designados dos miembros para intervenir las cuentas del Instituto e informar antes de cerrarse la sesión. El año económico del Instituto comenzará el 1 de julio.

6. Wáshington, D. C., será la sede oficial del Instituto, al menos que circunstancias de emergencia exijan su traslado temporal a otra parte, en cuyo caso el Comité Ejecutivo estará autorizado para decidir lo que convenga.

Artículo VI—Publicaciones

Las publicaciones del Instituto incluirán un informe sobre cada sesión y una publicación periódica, cuya forma estará siempre bajo el control del Instituto.

Artículo VII—Idiomas Oficiales

Los idiomas oficiales del Instituto serán el inglés, el español, el portugués y el francés.

Artículo VIII—Cuotas y Contribuciones Monetarias

1. Las cuotas de los miembros titulares serán de $5 al año, en moneda de los Estados Unidos o su equivalente. Un miembro que tuviere menos de 50 años de edad podrá hacerse miembro vitalicio mediante un pago único de $100; o si tuviere entre 50 y 60 años, mediante un pago de $70; o si pasare de los 60 años mediante un pago de $50.

2. Las cuotas de los gobiernos como miembros adherentes serán a una rata no mayor de $1.00 en moneda de los Estados Unidos por cada 1.000 habitantes. Las cifras de población usadas como base para calcular las cuotas serán las empleadas por la Unión Panamericana para fijar sus propias cuotas. La rata específica que se aplicará a dichas cifras de población para el cálculo de las cuotas la determinará periódicamente el Comité Ejecutivo, el cual deberá tener en cuenta el número e identidad de los miembros adherentes (gobiernos) y las necesidades presupuestales del Instituto.

3. Las cuotas de los miembros afiliados serán de $100 al año, con excepción de las cuotas de los bancos centrales, que no serán inferiores a $200 por año, dejando a la decisión del Comité Ejecutivo la determinación de una escala gradual.

4. Las cuotas de los miembros auspiciadores no serán inferior a $1.000 por año.

5. El Comité Ejecutivo está autorizado para proponer cuotas nacionales para proyectos especiales, y para solicitar y aceptar otras contribuciones, para concertar y recibir pagos por servicios estadísticos prestados por el Instituto, y para recibir y administrar fondos con destino a proyectos específicos.

Artículo IX—Enmiendas y Ratificaciones

1. El Comité Ejecutivo o 10 miembros del Instituto Interamericano de Estadística pueden presentar proposiciones de reformas de los Estatutos. Toda proposición de reforma será presentada por escrito al secretario general, y las reformas propuestas se publicarán en el órgano del Instituto o serán dadas a conocer a los miembros titulares por otros medios, junto con los nombres de los proponentes y la exposición de sus razones para sugerir los cambios. Las enmiendas serán adoptadas por los votos de los miembros titulares del Instituto, cuya recolección, mediante votación por correspondencia, estará a cargo del secretario general. Para que una enmienda sea adoptada se necesitarán dos terceras partes del total de los votos emitidos, siempre que no menos de las dos terceras partes de los miembros titulares participen en la votación.

Una proposición de afiliación del Instituto a cualquier organización estará sujeta a las mismas reglas de ratificación establecidas para una enmienda a los Estatutos si tal afiliación afecta los Estatutos del Instituto.

2. Las medidas o resoluciones administrativas o técnicas que en opinión del Comité Ejecutivo estén sujetas a la ratificación de los miembros, serán ratificadas en las sesiones del Instituto o mediante votación de todos los miembros por correspondencia. Para efectos de tal ratificación será necesaria la simple mayoría de todos los votos emitidos.

Artículo X—Procedimiento Parlamentario

En todo lo que se refiera a cuestiones de procedimiento regirá la última edición de "Robert's Rules of Order."

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COMMITTEES OF THE INTER AMERICAN STATISTICAL INSTITUTE

COMISIONES DEL INSTITUTO INTERAMERICANO DE ESTADISTICA

Committee on the 1950 Census of the Americas
Comisión del Censo de las Américas de 1950

Honorary chairman—Presidente honorario: Alberto Arca Parró, Perú. Chairman—Presidente: Calvert L. Dedrick, United States. Members—Miembros: Axel Rolff, Argentina; Jorge Pando Gutierrez, Bolivia; José Carneiro Felippe (alternate: Alexander de Moraes), Brasil; Omer A. Lemieux, Canada; Carlos Barrales Escobar, Chile; Eduardo Santos Rubio, Colombia; Walter Oreamuno Rodríguez, Costa Rica; Oswaldo Castro Intriago, Ecuador; José Alcaine, El Salvador; Raúl Sierra Franco, Guatemala; Lucien Hibbert, Haiti; Gilberto Loyo G., México; Carlos Rivas Opstaele, Nicaragua; Carmen Miró, Panamá; Carlos A. Soler, Paraguay; Augusto Mariátegui S., Perú; Vicente Tolentino Rojas, República Dominicana; Leon E. Truesdell, United States; Fermín Carlos Boado, Uruguay; Manuel Felipe Recao, Venezuela. Observers and liaison from international organizations—Observadores y enlace de los organismos internacionales: United Nations, Forrest E. Linder and John D. Durand. Pan American Union, Robert C. Jones; Food and Agriculture Organization of the United Nations, Conrad Taeuber (alternate: Valentino Dore).

Committee on Current Publications
Comisión de Publicaciones

Chairman—Presidente: Robert H. Coats, Canada. Members—Miembros: Carlos E. Dieulefait, Argentina; M. A. Teixeira de Freitas, Brasil; Ramón Beteta, México; Stuart A. Rice, United States.

Committee on Demographic Statistics
Comisión de Estadística Demográfica

Chairman—Presidente: Alberto Arca Parró, Perú. Members—Miembros: E. Jansen de Mello, Brasil; Atilio Macchiavello, Chile; Antonio Suárez Rivadeneira, Colombia; Luis T. Paz y Miño, Ecuador; Alberto P. León, México; Forrest E. Linder, United States. Representation from co-operating bodies—Representación de cuerpos cooperativos: Pan American Sanitary Bureau, Rafael H. Martínez.

Committee on Educational and Cultural Statistics
Comisión de Estadísticas de Educación y Cultura

Chairman—Presidente: M. B. Lourenco Filho, Brasil. Members—Miembros: Germano G. Jardim, Brasil; Carlos E. Upegui E., Colombia; Emilio Alanís Patiño, México.

Committee on Projects Review
Comisión de Revisión de Proyectos

Chairman—Presidente: M. Pérez Guerrero, Venezuela. Technical adviser—Consejero técnico: William F. Ogburn, United States. Members—Miembros: Carlos García Mata, Argentina; Roberto Vergara, Chile; Ramiro Guerra, Cuba.

Committee on Statistical Education
Comisión de Educación Estadística

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EDITORIAL NOTES—NOTAS EDITORIALES

In those countries of the Western Hemisphere where economic statistics have not yet reached a high level of development, monetary and banking statistics are especially important and useful. They serve in many instances the same purpose as other economic series since they are derived from the fundamental operations of the economic mechanism.

The circulation of money, classified as to source and destination, embraces all money and credit movements. It is the result of international trade and other transactions involved in the balance of payments, on the one hand, and of the creation of money by the monetary and banking authorities, on the other. It follows then that statistics of monetary circulation are the backbone of financial statistics. In one way or another, a large part of the economics of modern exchange is reflected in the quantity and velocity of circulation of the media of payments created by banks.

The use of these statistics is so essential to the analysis of economic conditions that one might say that detailed statistics of the circulating media supplant many other series and at the same time coordinate information within the functional scheme of the entire economic system.

An adequate and complete system for the calculation of the national money supply, which is equivalent to maintaining acceptable monetary and banking statistics, is becoming more and more necessary with the expansion of monetary and credit controls —controls that must be adapted to changing conditions in the money market.

This need is apparent also in the international field, where organizations charged with financial functions are obliged to observe closely the trends of monetary circulation in each country.

En el estado de relativo desarrollo de la estadística económica de algunos países del continente, las series monetarias y bancarias ofrecen un interés especial y prestan una ayuda particular, porque en muchas ocasiones pueden substituir a otras series del movimiento económico, como derivadas que son del funcionamiento general del mecanismo de una economía.

El proceso del medio circulante, subdividido según su origen y destino, abarca todo el movimiento monetario y crediticio, y es el resultado del intercambio comercial externo y de los demás renglones de la balanza de pagos por un lado, y, por otro, de la creación oficial y bancaria del dinero. De ahí que la estadística del medio circulante sea el centro de la estadística financiera. De alguna manera, gran parte de la economía de cambio moderna, queda reflejada en la cuantía y en la velocidad de circulación de los medios de pago bancarios.

Su uso es tan esencial en el análisis de la situación económica, que cabe decir que una estadística detallada del medio circulante suple a muchas otras series y las coordina en un esquema funcional de todo el cuerpo económico.

La conveniencia de que los países dispongan de un sistema de cálculo del medio circulante, adecuado y completo, lo que equivale a tener una estadística bancaria y monetaria aceptable, cada día presenta mayor urgencia, ante la implantación creciente del control del crédito y la dirección de la moneda. Control y dirección que habrán de proporcionarse a medida del curso del mercado monetario.

Esta necesidad, en el campo internacional, se agranda actualmente, debido a la existencia de organismos internacionales con funciones financieras que precisan observar las tendencias de la circulación monetaria de cada país.

In the international field, however, the problem becomes one of standardization of financial statistics—of the formation of national series covering comparable monetary operations. These national series should not only furnish isolated data, even though comparable—a point not yet attained—but should provide sufficient data to permit a structural and functional study of the entire economy. Banking and monetary statistics are capable of providing the framework within which the other economic manifestations can be displayed, especially those of a physical nature, relative to production, distribution, and consumption of goods.

Although financial statistics have reached a relatively high level of development within the aggregate of American statistics, their use in making comparative studies of the national economies involves some difficulties. The techniques used in their preparation, for example, are not in all cases the best, and frequently the scope and detail furnished are insufficient. They do, however, offer perhaps the best immediate possibilities for attaining amplification and improvement in the field of statistics. The characteristically limited number of reporting sources and the strong organizational forces of the banking, monetary, and fiscal institutions would make it possible to remedy, within a few years, statistical deficiencies such as those already mentioned.

International standardization of financial statistics is necessary and feasible, and since the problem affects all nations, its solution must have general application and must be based on agreement reached by governments as to uniform procedures and minimum series.

En este orden internacional, el problema estadístico se plantea en términos de normalización de la estadística financiera, de formación de series nacionales que obedezcan a idénticas operaciones monetarias, que coincidan en sus características, y que no sólo sirvan para proporcionar informaciones aisladas, aún cuando fueran comparables—meta todavía no alcanzada—sino que conduzcan a un examen estructural y funcional del sistema económico. La estadística bancaria y monetaria puede constituir un cuadro del esqueleto del conjunto económico, sobre el cual encaje el resto de las manifestaciones económicas, sobre todo aquellas de naturaleza física, relativas a la producción, distribución y consumo de los bienes.

La estadística financiera, en la actualidad, revela un nivel cualitativo, en el conjunto de la estadística americana, bastante aceptable. A pesar de eso, su técnica de elaboración no es la mejor en todos los casos, sus detalles y extensión, con frecuencia, son insuficientes. Esta es una dificultad con que se tropieza en el estudio comparativo de las distintas economías nacionales del hemisferio. Sin embargo, aquí nos hallamos, tal vez, ante el sector de mayores posibilidades inmediatas, en lo que atañe a la ampliación y perfeccionamiento estadísticos. Por lo limitado de las fuentes que reportan los datos y por la fuerza de organización de las entidades bancarias, monetarias y fiscales, no sería difícil remediar, en pocos años, las deficiencias e insuficiencias estadísticas de esta índole.

La standardización internacional de la estadística financiera es necesaria y factible, y puesto que el problema afecta a todas las naciones, su solución tiene que ser general, y partir del acuerdo de los gobiernos en cuanto a procedimientos únicos y series mínimas.

STATISTICAL NEWS—NOTICIAS ESTADISTICAS

INTERNATIONAL

Statistical Committee of Inter-American Council on Social Security

• At the second session of the Inter-American Council on Social Security, held in Rio de Janeiro November 10-22, 1947, a Statistical Committee was appointed to study the conclusions of the Joint Meeting of the Medical and Statistical Technical Commissions, which met in Washington, D. C., in January 1947. As a result of the discussions, the Statistical Committee presented the following resolutions to the Conference: That the conclusions of the Medical and Statistical Technical Commissions submitted to the Conference should be approved in principle, with the exclusion of the Provisional Minimum List of Selected Diagnoses for the Codification of Causes of Illness; that the *International Statistical Classification of Diseases, Injuries and Causes of Death*, which was proposed by the International Committee of the World Health Organization for Preparation of the Sixth Decennial Revision of the International Lists of Diseases and Causes of Death, be substituted for the rejected list and taken into consideration at the next meeting of the Technical Commissions; that the final work of the Medical and Statistical Technical Commissions should be carried on in consultation with the World Health Organization as regards the statistical classification of diseases and causes of death; that the "Preparatory Study of a Common Plan of Work for the Statistical Services of Social Insurance on the American Continent," submitted by the Secretary-General of the Inter-Amer-

Comisión de Estadística del Consejo Interamericano de Seguridad Social

• En la segunda sesión del Consejo Interamericano de Seguridad Social, celebrada en Río de Janeiro del 10 al 22 de Noviembre de 1947, fué nombrada una Comisión de Estadística para estudiar las conclusiones de la Reunión Conjunta de la Comisión Médica y de la Comisión Técnica de Estadística, las cuales se habían reunido en Wáshington, D. C., en Enero de 1947. Como resultado de las discusiones, la Comisión de Estadística presentó a la Conferencia las siguientes resoluciones, recomendando: La aprobación, en principio, de las conclusiones que las Comisiones Médica y Técnica de Estadística sometieron a la Conferencia, con la exclusión de la Lista Mínima Provisional de Diagnosis Seleccionadas para la Codificación de las Causas de Enfermedad; la sustitución de la lista rechazada por la *Clasificación Estadística Internacional de Enfermedades, Traumatismos y Causas de Defunción* aprobada por el Comité Internacional de la Organización Mundial de la Salud para la Preparación de la Sexta Revisión Decenal de las Listas Internacionales de Enfermedades y Causas de Defunción, y que ésta sea tomada en consideración en la próxima reunión de las Comisiones Técnicas; que el trabajo final de las Comisiones Médica y Técnica de Estadística sea llevado a cabo previa consulta con la Organización Mundial de la Salud en lo que hace referencia a la clasificación estadística de enfermedades y causas de defunción; la aceptación y distribución entre las naciones ameri-

ican Committee on Social Security, be accepted and, after its circulation among the American nations, should be submitted to the Medical and Statistical Technical Commissions with the comments and suggestions received.

In addition, a resolution proposed by the Brazilian delegation was adopted, recommending that the governments of the American nations take advantage of the 1950 Census with the object of obtaining statistical information on social security, and that the Statistical Technical Commission seek the necessary co-operation of the Coordinating Board of the Committee on the 1950 Census of the Americas. (Source: O. A. de Moraes, Brazil.)

canas del "Estudio Preparatorio de un Plan Común de Trabajo para los Servicios Estadísticos del Seguro Social en el Continente Americano," presentado por el Secretario General del Comité Interamericano de Seguridad Social, y que dicho estudio sea sometido a las Comisiones Médica y Técnica de Estadística con los comentarios y sugestiones recibidas.

Además, fué aprobada una resolución formulada por la Delegación Brasilera recomendando que los gobiernos de las Naciones Americanas aprovechen el Censo de 1950 con el objeto de obtener información estadística sobre seguridad social, y que la Comisión Técnica de Estadística gestione la cooperación necesaria de la Junta Coordinadora de la Comisión del Censo de las Américas de 1950. (Fuente: O. A. de Moraes, Brasil.)

Standard industrial classification

• The Statistical Commission of the Economic and Social Council of the United Nations has distributed among the member nations and the Specialized Agencies, for their comments and suggestions, an International Standard Industrial Classification, prepared by a committee appointed by the Statistical Commission.

The Committee on Industrial Classification, in its report, supports the principles set forth by the Committee of Statistical Experts of the League of Nations on statistics of the gainfully-occupied population, published under the title *Statistics of the Gainfully-Occupied Population*. (A translation of the document—*Estadísticas de la Población Activa: Definiciones y Clasificaciones Recomendadas por el Comité de Expertos de la Sociedad de las Naciones, 1938*—was published by the IASI in August 1947.) (Source: *A Proposed International Standard Industrial Classification*, Statistical Commission, United Nations.)

Clasificación industrial standard

• La Comisión Estadística del Consejo Económico y Social de las Naciones Unidas ha distribuido entre las naciones miembros de la UN y los organismos especializados, para su consulta y recomendaciones, una clasificación Industrial Internacional Uniforme preparada por el comité que para tal efecto designó la Comisión de Estadística.

La Comisión de Clasificación Industrial, en su informe, apoya los principios enunciados por el Comité de Expertos Estadísticos de la Sociedad de las Naciones, relativos a las estadísticas de la población activa, y publicados bajo el título *Statistics of the Gainfully-Occupied Population*. (El IASI, en agosto de 1947, editó una traducción española de este documento: *Estadísticas de la Población Activa: Definiciones y Clasificaciones Recomendadas por el Comité de Expertos de la Sociedad de las Naciones, 1938*.) (Fuente: *Una Propuesta para la Clasificación Industrial Internacional Uniforme*, Comisión de Estadística, Naciones Unidas.)

Classification of diseases, injuries, and causes of death

• A Spanish translation of the proposed revision of *International Statistical Classification of Diseases, Injuries, and Causes of Death*, prepared by the International Committee of the World Health Organization as a basis for the Sixth Decennial Revision in 1948, was published in September 1947. Copies in Spanish, English, or French are available at the World Health Organization in New York or Geneva. (Source: *Clasificación Estadística Internacional de las Enfermedades, de los Traumatismos y de las Causa de Defunción*, New York, September 1947.)

Elections of International Statistical Institute

• The International Statistical Institute elected three honorary presidents at the meetings in Washington, D. C., in September 1947. They are: Armand Julin of Belgium, H. W. Methorst of The Netherlands, and Walter L. Willcox of the United States.

Stuart A. Rice, United States, was elected president of the Institute; Jan Tinbergen, The Netherlands, secretary-general; Arthur L. Bowley, United Kingdom, treasurer; and Gunnar Jahn, Norway; P. C. Mahalanobis, India; Jacques Rueff, France; and E. Szturm de Sztrem, Poland—vice presidents.

Several statisticians from the Western Hemisphere were honored by election to membership in the Institute. The seven new members of the ISI are: J. P. Fontenelle, Brazil; E. A. Goldenweiser, United States; H. A. Innes, Canada; Isador Lubin, United States; E. A. Saari, Finland; A. Sauvy, France; and F. Yates, United Kingdom. (Source: *The American*

Clasificación de las enfermedades, de los traumatismos y de las causas de defunción

• En septiembre de 1947, fué publicada la propuesta de revisión de la *Clasificación Estadística Internacional de las Enfermedades, de los Traumatismos y de las Causas de Defunción*, preparada por el Comité Internacional de la Organización Mundial de la Salud como base de discusión para la Sexta Revisión Decenal, que se efectuará en 1948. Las copias de este documento, en inglés, español y francés, pueden conseguirse de World Health Organization en Nueva York o Ginebra. (Fuente: *Clasificación Estadística Internacional de las Enfermedades, de los Traumatismos y de las Causas de Defunción*, New York, septiembre 1947.)

Elecciones del Instituto Internacional de Estadística

• En la reunión del Instituto Internacional de Estadística, celebrada en septiembre de 1947, en Wáshington, D. C., fueron elegidos como presidentes honorarios los señores Armand Julin, de Bélgica, H. W. Methorst de Holanda, y Walter L. Willcox, de los Estados Unidos.

Se eligió presidente del Instituto, al Sr. Stuart A. Rice, de los Estados Unidos; secretario general, al Sr. Jan Tinbergen, de Holanda; tesorero al Sr. Arthur L. Bowley, de los Estados Unidos; y vicepresidentes a los Srs. Gunnar Jahn, de Noruega, P. C. Mahalanobis, de la India, Jacques Rueff, de Francia, y E. Szturm de Sztrem, de Polonia.

A varios estadísticos del Hemisferio Occidental se les distinguió con el nombramiento como miembros del Instituto. Los nuevos miembros son: J. P. Fontenelle, Brasil; E. A. Goldenweiser, Estados Unidos; H. A. Innes, Canadá; Isador Lubin, Estados Unidos; E. A. Saari, Finlandia; A. Sauvy, Francia; y F. Yates, Reino Unido. (Fuente: *The American Statistician*,

Statistician, vol. 1, no. 2, October 1947, Washington, D. C.)

International Union for the Scientific Study of Population

• At its reorganization meetings held during the International Statistical Conferences in September 1947, the International Union for the Scientific Study of Population adopted a new constitution. In addition to shortening the name of the organization from "The International Union for the Scientific Investigation of Population Problems," and other detailed changes, the principal change effected by the new constitution was one providing for individual membership rather than membership based upon national committees. The individuals will be chosen on the basis of their scientific contributions. If the individual membership of a country totals five or more, a national committee shall be organized, and its chairman will represent the national committee before the Union. No formal limitation was put on the number of members from any one country, but one country may not hold more than one-eighth of the votes. The General Assemblies shall be held at least once every three years. (Source: *Population Index*, vol. 13, no. 4, October 1947, Washington, D. C.)

International Association for Research in Income and Wealth

• This Association was formed at the Washington Conferences of the International Statistical Institute to promote and co-ordinate studies of national income and national wealth. The Association Council, under the chairmanship of Simon Kuznets (United States), includes some of the outstanding economists and statisticians in this field. The Council membership comprises: Simon Kuznets, chairman; Colin Clark, Australia; J. B. D. Derksen, The Netherlands; Milton Gilbert, United States;

vol. 1, no. 2, Octubre 1947, Wáshington, D. C.)

Unión Internacional para el Estudio Científico de la Población

• La Unión Internacional para el Estudio Científico de la Población, en su reunión reorgánica, celebrada durante las Conferencias Internacionales de Estadística, en septiembre de 1947, adoptó una nueva constitución. Además de la abreviación del nombre de la organización (The International Union for the Scientific Investigation of Population Problems) y otros cambios de detalle, la principal modificación que contienen los nuevos estatutos se refiere a la integración de la asociación con miembros individuales en lugar de miembros de comités nacionales. Los miembros serán elegidos con base en sus aportes científicos. En caso de que los miembros de un país alcancen a cinco o más, se organizará un comité nacional, y su presidente representará, ante la Unión, al comité nacional. No se fijaron limitaciones formales sobre el número de miembros de un país, pero quedó establecido que un país no puede tener más de un octavo del total de votos. Las asambleas generales se celebrarán por lo menos una cada tres años. (Fuente: *Population Index*, vol. 13, no. 4, octubre, 1947, Wáshington, D. C.)

Asociación Internacional para la Investigación de la Renta y Riqueza

• La nueva asociación fué creada, en las Conferencias de Wáshington del Instituto Internacional de Estadística, con el fin de promover y coordinar los estudios sobre la renta nacional y la riqueza. El Consejo de la Asociación, bajo la presidencia del Sr. Simon Kuznets (Estados Unidos), está formado por economistas y estadísticos sobresalientes en este campo. El Consejo comprende a los siguientes miembros: Simon Kuznets, Presidente; y Colin Clark, Australia; J. B. D. Derksen, Holanda; Milton Gilbert,

E. F. Lundberg, Sweden; François Perroux, France; V. K. R. V. Rao, India; J. Richard Stone, England; and Jan Tinbergen, The Netherlands. (Source: *The American Statistician*, vol. 1, no. 2, October 1947, Washington, D. C.)

International Biometric Society

• A new organization, the Biometric Society, was formed at the first International Biometric Conference, held at Woods Hole, Massachusetts, on September 5 and 6, 1947. The Conference was arranged by a special organizing committee and was attended by approximately 100 biologists, statisticians, and mathematicians.

The Society will be based on individual memberships without national quotas. As stated in its constitution, "The Biometric Society is an international society for the advancement of quantitative biological science through the development of quantitative theories and the application, development and dissemination of effective mathematical and statistical techniques. To this end the Society welcomes to membership biologists, mathematicians, statisticians, and others interested in applying similar techniques." (Source: *The American Statistician*, vol. 1, no. 2, October 1947, Washington, D. C.)

Estados Unidos; E. F. Lundberg, Suecia; François Perroux, Francia; V. K. R. V. Rao, India; J. Richard Stone, Inglaterra; y Jan Tinbergen Holanda. (Fuente: *The American Statistician*, vol. 1, no. 2, octubre 1947, Wáshington, D. C.)

Sociedad Internacional de Biometría

• En la primera Conferencia Internacional de Biometría, celebrada en Woods Hole, Massachusetts, el 5 y 6 de septiembre de 1947, fué creada una nueva organización: La Sociedad de Biometría. La organización de la conferencia corrió a cargo de un comité especial de organización; asistieron aproximadamente 100 biólogos, estadísticos y matemáticos.

La Sociedad estará formada por miembros individuales, sin cuotas nacionales. De acuerdo con lo establecido en sus estatutos, "La Sociedad de Biometría es una asociación internacional para el avance de la ciencia biológica cuantitativa por medio del desarrollo de las teorías cuantitativas y la aplicación, desarrollo y extensión de las técnicas matemáticas y estadísticas, efectivas. Para estos fines la Sociedad admite en calidad de miembros a biólogos, matemáticos, estadísticos y a otros que estén interesados en la aplicación de tales técnicas." (Fuente: *The American Statistician*, vol. 1, no. 2, octubre 1947, Wáshington, D. C.)

Personal notes—Noticias personales

• *Mr. Luis Rose Ugarte*, Economic Division, United Nations Food and Agriculture Organization, left the United States in December 1947 for a trip of several months to various Latin American nations in connection with the proposed 1950 World Census of Agriculture. Mr. Rose will explore the possibilities of establishing training institutes or seminars at several points in the Western Hemisphere for the training of technicians in agricultural census techniques.

• *Mr. Gordon Wrong*, chief, Public Utilities Statistics Division, Dominion Bureau of Statistics, Canada, was named as an observer for the IASI at the First Session of the International Civil Aviation Statistics Division, held in Montreal, January 13, 1948. Mr. Wrong attended the Session as a representative of the Dominion Bureau of Statistics.

ARGENTINA

Organic decree on statistics

• On November 6, 1947, the President of Argentina issued Decree No. 34,816 which divides the National Bureau of Research, Statistics, and Census into two dependencies: The general technical bureau, which will be called General Bureau of Statistics and Census, and the Bureau of Administration of Statistics and Census. The considerations entering into this decree were the opinion formulated by the Coordinating Council of Research, Statistics and Census, the termination of the work on the Fourth General Census of the Nation, and the necessity for an organic structure for the National Bureau of Research, Statistics, and Census, which is in charge of the elaboration of the census data and general production of statistics.

The General Bureau of Statistics and Census will be headed by a director general and a subdirector general, and will be composed of the following departments: Census Mobilization and Field Organization; Demographic and Social Statistics; Agricultural and Livestock Statistics; Industrial Statistics; Building and Public Works Statistics; Trade Statistics; Transport and Communication Statistics; Financial and Monetary Statistics; Government Statistics; and Machine Tabulation. (Source: Enrique Catarineu, GBSC, Buenos Aires.)

Decreto orgánico de la estadística

• Previo dictamen del Consejo Coordinator de Investigaciones, Estadística y Censos, y en atención a que se ha dado término a las tareas relacionadas con el levantamiento del Cuarto Censo General de la Nación y a la necesidad de adoptar una estructura orgánica para la Dirección Nacional de Investigaciones, Estadística y Censos, encargada de la elaboración de los datos censales y de la producción general de estadísticas, el Presidente de la Nación Argentina dictó el Decreto No. 34.816 de 6 de noviembre de 1947, por el cual se divide la Dirección Nacional de Investigaciones, Estadística y Censos en dos dependencias: La dirección general técnica, que se denominará Dirección General de Estadística y Censos, y la Dirección de Administración de Estadística y Censos.

La Dirección General de Estadística y Censos estará a cargo de un director general y un subdirector general, y constará de los siguientes departamentos: Movilización Censal y Delegaciones; Estadística Demográfica-Social; Estadística Agropecuaria; Estadística Industrial; Estadística de Edificación y Obras Públicas; Estadística Comercial; Estadística de Transporte y Comunicaciones; Estadística Financiera y Monetaria; Estadística de Actividades del Estado; y Compilación Mecánica. (Fuente: Enrique Catarineu, DGEC, Buenos Aires.)

Classification of foreign trade

• The General Bureau of Research, Statistics, and Census presented to the First Session of IASI, held in September 1947, an *Esquema Básico de Clasificación* (Basic Classification Scheme) for foreign trade commodities which shows the items of the Argentine classification which correspond to each item of the Basic Classi-

Clasificación del comercio exterior

• La Dirección Nacional de Investigaciones, Estadística y Censo presentó a la Primera Sesión del IASI, celebrada en septiembre de 1947, un *Esquema Básico de Clasificación* de artículos del comercio exterior, que indica los números de la clasificación argentina que corresponden a cada numeral del Esquema Básico pro-

fication Scheme proposed by IASI. The classification contains 7345 commodities listed under the 17 sections of the Minimum List of the League of Nations. (Source: Enrique Catarineu, GBSC, Buenos Aires.)

puesto por el IASI. La clasificación comprende 7.345 artículos, distribuidos en las 17 secciones de la Lista Mínima de la Liga de Naciones. Fuente: Enrique Catarineu, DGEC, Buenos Aires.)

BOLIVIA

The tariff and the international nomenclature

• Dr. Jorge Pando Gutierrez, director general of statistics, presented to the First Session of the IASI, held in September 1947, two studies developed by his office in adopting the *Minimum List of Commodities for International Trade Statistics*. The first study *(Párrafos del Arancel Boliviano, Adaptados a la Nomenclatura Internacional)* considers the numbers of the Minimum List, classifying under each of them the corresponding items of the Bolivian tariff. The second *(Arancel Aduanero de Bolivia que Deberá ser Subdividido al Adoptarse la Nomenclatura Internacional)* is concerned with the tariff items which require subdivision. In both studies the texts of the Minimum List and the tariff were kept intact. The adoption of the Minimum List, according to Dr. Pando Gutierrez, will necessitate: (1) The revision of some points of the Minimum List, subdividing some items, and (2) the recommendation that all countries carry out the subdivisions needed in their tariffs. (Source: Jorge Pando Gutierrez, GBS, La Paz.)

El arancel y la nomenclatura internacional

• El Sr. Jorge Pando Gutierrez, director general de estadística, presentó a la Primera Sesión del IASI, celebrada en septiembre de 1947, dos trabajos adelantados por aquella oficina en el campo de la adopción de la *Lista Mínima de Mercancías para Estadísticas del Comercio Exterior*. El primer estudio *(Párrafos del Arancel Boliviano, Adaptados a la Nomenclatura Internacional)* considera los números de la Lista Mínima, clasificando dentro de cada uno de ellos los diferentes párrafos del arancel boliviano. El segundo *(Arancel Aduanero de Bolivia que Deberá ser Subdividido al Adoptarse la Nomenclatura Internacional)* se ocupa de cada uno de los párrafos del arancel que requieren división. En ambos trabajos se conservaron íntegros los textos, tanto de la Lista Mínima como del Arancel. La adopción de la Lista Mínima, en concepto del Sr. Pando Gutierrez, exige: (1) La revisión de algunos puntos de la Lista Mínima, subdividiendo algunos items, y (2) recomendar a todos los países las subdivisiones necesarias en sus aranceles. (Fuente: Jorge Pando Gutierrez, DGE, La Paz.)

BRAZIL

Convertibility indexes for foreign trade

• The Brazilian delegation to the First Session of the IASI, held in September 1947, contributed a study on "Construction of National Con-

Indices de conversibilidade do comércio exterior

• A Delegação Brasileira à Primeira Sessão do IASI, realizada em setembro de 1947, apresentou um estudo

vertibility Indexes for Foreign Trade Statistical Classifications" in Portuguese, Spanish, and English. The work was accomplished under the direction of Prof. Octavio Alexander de Moraes of the National Census Service with the collaboration of the staff members of that agency and the General Secretariat of the Brazilian Institute of Geography and Statistics. (Source: *Construction of National Convertibility Indexes for Foreign Trade Statistical Classifications*, Rio de Janeiro, 1947.)

intitulado *Preparo de Indices Nacionais de Conversibilidade para Classificações Estatísticas do Comércio Exterior*, em português, espanhol e inglês. O trabalho foi executado sob a direção do Prof. Octavio Alexander de Moraes, do Serviço Nacional de Recenseamento, com a colaboração de elementos de mesmo Serviço e da Secretaria Geral do Instituto Brasileiro de Geografia e Estatística. (Fonte: *Preparación de Indices Nacionales de Convertibilidad para Clasificaciones Estadísticas del Comercio Exterior*, Rio de Janeiro, 1947.)

Estimates of agricultural production

• The Service of Production Statistics of the Ministry of Agriculture has adopted a method by which crop estimates and verifications can be made on a quarterly basis. This method is being used with appreciably good results, owing to the uniformity in the collection of data throughout the country made possible by the National Agreements on Municipal Statistics, under which the administration of the statistical agencies of the municipios was transferred to the Brazilian Institute of Geography and Statistics. The statistics thus obtained make it possible to estimate agricultural production for the entire country. The data already published under this new method have proved to be up-to-date, and permit ready determination of the cultivated area, cost of production, and average yield per hectare. (Source: Germano Jardim, IBGE, Washington, D. C.)

Estimativas da produçao agrícola

• O Serviço de Estatística da Produção, do Ministério da Agricultura, adotou um sistema de previsão e confirmação das safras em ritmo trimestral, o qual está sendo posto em prática, com apreciáveis resultados, graças à uniformidade da coleta de dados, em todo o território nacional, possibilitada pela execução dos Convênios Nacionais de Estatística Municipal, mediante os quais passaram as agências de estatística dos municípios, à administração do Instituto Brasileiro de Geografia e Estatística. Os informes estatísticos assim obtidos permitem proceder à estimativa da produção agrícola, no país inteiro. Os dados já divulgados traduzem um grau de atualização notável, e prestam-se à pronta verificação da área cultivada, custo da produção e rendimento médio por hectare. (Fonte: Germano Jardim, IBGE, Washington, D. C.)

Personal notes—Notas pessoais

• *Dr. Rafael Xavier*, director, Serviço de Estatística da Produção, Ministério da Agricultura, was appointed secretário geral interino of the IBGE in December 1947. He is serving in that capacity in the absence of Dr. Teixeira de Freitas, who is on leave of absence due to ill health. As secretário, Dr. Xavier automatically becomes an ex officio member of the IASI, for the period during which Dr. Teixeira de Freitas is away.

• *Prof. Jorge Zarur*, subdirector, Serviço de Geografia e Cartografia, left New York in January 1948, to return to Brazil. Prof. Zarur has completed his study on cartography and geography in Latin America and is resuming his post in the Serviço de Geografia e Cartografia.

CANADA

Recent statistical activities

• The Sampling Unit of the Central Research and Development Division has carried out four surveys of the labor force, one of which was a two per cent sample of population. Additional sample surveys were conducted in 1947 on such subjects as multiple occupancy; farm fires and accidents; household facilities such as heating equipment, telephones, radios; residential rents; the loss of time resulting from illness; and the incidence of arthritis in Canada.

• The results of the sampling survey to determine average rentals across the Dominion will be used in the rental component of the cost-of-living index. The survey will be made quarterly, and one fourth of the sample will be changed each time. The rental component was previously obtained from real estate agents whose returns were found to be quite dependable. Contact with the agents will be maintained for purposes of inter-spacial comparisons on specified types of housing.

• The Education Division of the Dominion Bureau of Statistics, in collaboration with the Department of National Health and Welfare, is making a study of the possibility of establishing statistical series in the field of recreational and cultural activities. (Source: H. Marshall, DBS, Ottawa.)

Actividades estadísticas recientes

• La Sección de Muestreo de la División Central de Investigación y Fomento ha llevado a cabo cuatro investigaciones sobre la fuerza de trabajo, una de las cuales se basó en una muestra del dos por ciento de la población. En 1947, se realizaron investigaciones por muestreo, adicionales, sobre temas como la ocupación múltiple de la vivienda; incendios y accidentes en las haciendas; los servicios de la casa, por ejemplo, calefacción, teléfono, radio; el alquiler, la pérdida de tiempo por enfermedades; y la incidencia de la artritis en Canadá.

• El resultado de la investigación por muestreo conducente a determinar el promedio de los alquileres en todo el Dominio, será utilizado en el grupo de alquiler del índice del costo de la vida. La investigación se hará trimestralmente, y en cada una de esas ocasiones se cambiará una cuarta parte de la muestra. Con anterioridad, se obtuvieron los datos sobre el grupo del alquiler, de los agentes de la propiedad raiz, cuyos informes resultaron completamente confiables. A fin de conseguir comparaciones geográficas en determinados tipos de vivienda, se mantendrá el contacto con dichos agentes.

• La División de Educación de la Dirección de Estadística del Dominio, en colaboración con el Departamento Nacional de Salud y Bienestar, adelanta un estudio sobre las posibilidades de elaborar series estadísticas en el campo de las actividades culturales y recreativas. (Fuente: H. Marshall, DED, Ottawa.)

CHILE

Personal notes—Noticias personales

• *Sr. Luis Cárcamo C.*, former jefe, Sección de Estadística, Inspección General del Trabajo, was appointed director general de estadística in December 1947. As director general, Sr. Cárcamo has been named an ex officio member of the IASI.

• *Sr. Bjorn Koch*, former encargado, División de Control y Costos del Ministerio de Economía y Comercio, was named jefe del Departamento de Precios del Comisariato General de Subsistencias in October 1947.

• *Sr. Santiago Woscoboinik*, Corporación de Fomento de la Producción de Chile, returned to his country in January 1948, after a 4-year stay in the United States. Sr. Woscoboinik, who was with the IASI for two years on loan from the Corporación, will be on the staff of the Compañía de Acero del Pacífico, which is affiliated with the Corporación.

COLOMBIA

Coffee census

• The Coffee Congress of Colombia, which was organized by the National Federation of Coffee Planters, and met on October 15 to 18, 1947, approved the following resolution concerning a coffee census: "The Conference highly recommends to the heads of the Federation and the National Coffee Committee that they begin studies necessary for a nation-wide coffee census and that for this purpose they secure as soon as possible technicians specialized in this field, so that in the future a sound basis may be assured for the distribution, among the various departmental committees, of the funds collected by the Federation." (Source: National Federation of Coffee Planters, Bogotá.)

Conversion of foreign trade statistics

• The representatives of Colombia at the First Session of the IASI, held in September 1947, presented a *Tabla de Conversión de la Clasificación Estadística del Comercio Exterior de Colombia a la de la Lista Mínima de Mercancías* (conversion table of the statistical foreign trade classification of Colombia to that of the Minimum List of

Censo cafetero

• El Congreso Cafetero de Colombia, organizado por la Federación Nacional de Cafeteros, cuyas reuniones tuvieron lugar del 15 al 18 de octubre de 1947, aprobó la siguiente resolución sobre censo cafetero: "La Conferencia recomienda encarecidamente a la gerencia de la Federación y al Comité Nacional Cafetero que adelanten los estudios necesarios para proceder al levantamiento del censo cafetero en todo el país, debiendo para ello contratar, lo más pronto posible, técnicos especializados en este ramo, a fin de que, en el futuro se cuente con una base segura para hacer la distribución entre los distintos comités departamentales, de los fondos que recauda la Federación." (Fuente: Federación Nacional de Cafeteros, Bogotá.)

Conversión de la estadística de comercio exterior

• La representación colombiana a la Primera Sesión del IASI, celebrada en septiembre de 1947, presentó una *Tabla de Conversión de la Clasificación Estadística del Comercio Exterior de Colombia a la de la Lista Mínima de Mercancías*, que fué preparada por la Sección de Comercio Exterior (DNE)

commodities), which was prepared by the Foreign Trade Section of the National Bureau of Statistics under the direction of Mr. Benjamín Arévalo Correal. The study contains the conversion table, items of the Minimum List which have no corresponding items in the classification of foreign trade statistics for 1947, and items measured in units other than the kilogram. The tables contain triple reference numbers—to the Minimum List, to the foreign trade statistical classification, and to the customs tariff. (Source: Eduardo Santos Rubio, NBS, Bogotá.)

Recent statistical activities

• The National Bureau of Statistics announces the forthcoming publication of a study on social conditions and the cost of living in the city of Mariquita, of the Prison Census of 1945, and of the *Anuarios Generales de Estadística y Comercio Exterior de 1946* (General Yearbooks of Statistics and Foreign Trade for 1946).

• The National Bureau of Statistics is now studying the possibilities of initiating surveys of certain economic-social themes as a measure of public opinion, using the standards which the Gallup Institute has adopted in the United States.

• In accordance with the specifications of the Subcommittee of Statistical Experts of the League of Nations, the National Bureau of Statistics is now preparing the balance of payments in a way that will permit international comparisons. The work will be presented in a special publication which will include general comments on balance of payments, its history, the criticisms, an explanation of the system adopted in general, and in particular for each one of the categories which form it, and an analysis of the results obtained.

• The Comptrollership General of the Republic is continuing work on the Regional Economic Geographies.

bajo la dirección del Ing. Benjamín Arévalo Correal. El trabajo contiene la tabla de conversión, los numerales de la Lista Mínima sin correlación con los artículos clasificados en la estadística del comercio exterior para 1947 y los numerales que llevan unidad distinta del kilogramo. Las tablas contienen la triple referencia numeral a la Lista Mínima, a la clasificación estadística del comercio exterior y al arancel aduanero. (Fuente: Eduardo Santos Rubio, DNE, Bogotá.)

Actividades estadísticas recientes

• La DNE anuncia la pronta publicación del estudio sobre las condiciones sociales y costo de la vida en la ciudad de Mariquita, y el Censo Carcelario de 1945, así como los *Anuarios Generales de Estadística y Comercio Exterior de 1946*.

• La DNE estudia actualmente las posibilidades de iniciar encuestas sobre determinados temas económico-sociales como una medición de la opinión pública, bajo las normas que el Instituto Gallup ha adoptado en los Estados Unidos.

• La DNE ha iniciado la elaboración de la balanza de pagos de acuerdo con las especificaciones del Sub-Comité de Expertos Estadísticos de la Sociedad de Naciones, en forma que se preste a las comparaciones internacionales. El trabajo se presentará en una publicación especial que comprenderá los comentarios generales sobre balanza de pagos, su historia, su crítica, y explicación del sistema adoptado en general y en especial de cada uno de los renglones que la forman, lo mismo que el análisis de los resultados obtenidos.

• La Contraloría General de la República adelanta la obra de las Geografías Económicas Regionales. Actualmente está redactándose la correspondiente al Departamento de

At present it is drawing up that of the Department of Cundinamarca, and the special committees appointed for the gathering of data are working in the Departments of Magdalena and the Valley of the Cauca. In order to keep up-to-date the information in the geographies already published—Antioquia, Atlántico, Boyacá, Caldas, Bolívar, Chocó, Tolima and Santander—the Comptrollership publishes special Graphic Economic Albums for each section and a general one for the Republic. (Source: Office of the Comptroller General, Bogota.)

Cundinamarca, y las comisiones especiales nombradas para el acopio de los datos, trabajan en los Departamentos del Magdalena y del Valle del Cauca. Para poner al día la información de las geografías hasta ahora publicadas—Antioquia, Atlántico, Boyacá, Caldas, Bolívar, Chocó, Tolima y Santander—la Contraloría dispone la publicación de Albums Gráficos Económicos especiales para cada sección y uno general de la República. (Fuente: Contraloría General de la República, Bogotá.)

Personal notes—Noticias personales

• *Dr. Carlos Lleras Restrepo*, second vice president, Inter American Statistical Institute, was named by the Colombian Government as chief of its delegation to the United Nations Conference on Trade and Employment which convened in Havana in November 1947.

• *Dr. Alfonso Palacio Rudas*, contralor general de la República, was elected by the General Assembly in November 1947 as one of the three auditors of the United Nations. The auditors are elected for a period of three years, serving two months out of each year when the General Assembly is in session. Dr. Palacio, who began his duties in January 1948, is retaining his post as contralor general.

COSTA RICA

The 1950 *Census*

• At its meeting in November 1947 the Costa Rican Statistical Association agreed to appoint a committee for collaboration in the organization of the experimental Census of Population and Agriculture in the Central District of Turrialba. This action was proposed by Mr. Julio A. Morales, chief of the Department of Rural Economics of the Institute of Agricultural Sciences of Turrialba. This Institute will be in charge of the experimental Census which is to take place in March 1948, in preparation for the 1950 censuses. (Source: *Información Económica*, no. 3, November 30, 1947, San José.)

El Censo de 1950

• La Asociación Costarricense de Estadística, en reunión celebrada en noviembre de 1947, y a propuesta del Sr. Julio A. Morales, jefe del Departamento de Economía Rural del Instituto de Ciencias Agrícolas de Turrialba, acordó nombrar una comisión para colaborar en la organización del Censo Experimental de Población y Agricultura en el Distrito Central de Turrialba, que tendrá lugar en marzo de 1948 a cargo de dicho Instituto, como preparación de los censos de 1950. (Fuente: *Información Económica*, no. 3, noviembre 30, 1947, San José.)

Convertibility index for foreign trade

• The General Bureau of Statistics has produced the first tabulations of foreign trade statistics adjusted to the Convertibility Index prepared by the IASI. The first data refer to 1946 trade. In the new classification imports, exports and re-exports are adjusted to the 17 general groups of the Convertibility Index. (Source: *Información Económica*, no. 1, October 31, 1947, San José.)

Industrial Census

• The Chamber of Industries, in collaboration with the ANDE (teachers' association), is preparing to undertake an Industrial Census of the Republic. Besides the help of the teachers' association, the organizing body has the support of the Costa Rican Statistical Association and of the chief of the Statistics Section of the Department of Agriculture. The technicians of the Statistical Association designed the questionnaire and the corresponding instructions; the teachers will visit the factories and workshops to collect the data. The main headings on the questionnaire are the following: Location of the establishment; production; investments; personnel employed; wages and salaries paid; mechanical power; and other data such as the founding date of the enterprise, and the number of months that the enterprise works per year. (Source: *Información Económica*, no. 2, November 15, 1947, San José.)

Indice de convertibilidad del comercio exterior

• La Dirección General de Estadística ha producido las primeras concentraciones de la estadística del comercio exterior ajustadas al Indice de Convertibilidad elaborado por el IASI. Las primeras cifras se refieren al intercambio comercial durante 1946. Tanto para las importaciones como para las exportaciones y reexportaciones la nueva clasificación se ajusta a los 17 grupos generales del Indice de Convertibilidad. (Fuente: *Información Económica*, no. 1, octubre 31, 1947, San José.)

Censo Industrial

• La Cámara de Industrias, en colaboración con la ANDE (agrupación de maestros), se dispone a emprender la obra de un Censo Industrial de la República. La entidad organizadora cuenta con la ayuda de la asociación de maestros, con el apoyo de la Asociación Costarricense de Estadística y del jefe de la Sección de Estadística de la Secretaría de Agricultura. Los técnicos de la Asociación de Estadística proyectaron la boleta y las instrucciones correspondientes; los maestros prestarán servicio en la recolección de los datos, mediante la visita a las fábricas y talleres para la anotación de los mismos. Los grandes capítulos de la boleta son los siguientes: Localización del establecimiento; producción; inversiones; personal empleado; salarios y sueldos pagados; potencial de los motores; y otros datos tales como época de fundación de la empresa y número de meses que trabaje la empresa en el año. (Fuente: *Información Económica*, no. 2, noviembre 15, 1947, San José.)

Personal notes—Noticias personales

• *Lic. Luis D. Tinoco*, secretario, Secretaría de Educación Pública y Secretaría de Hacienda y Comercio, was elected as one of the vice presidents of the United Nations Conference on Trade and Employment, which opened in Havana in November 1947.

DOMINICAN REPUBLIC

Activities of the Statistical Council

• On October 31, 1947, the National Statistical Council was installed. The first achievement of this new organization was the organization of the Statistical Office of the Administrative Council of the District of Santo Domingo, which began work on January 1, 1948. (Source: Eduardo de Castro, GBS, Ciudad Trujillo.)

Statistical courses in the National University

• The program of statistical courses in the School of Philosophy was established keeping in mind not only the purpose of serving as an element of general culture for the students enrolled in that school, but also for other students, i.e., employees of the statistical services, those seeking employment in these services, and students enrolled in other schools. The studies are divided into three sessions. In the first, classes are given on the origin of statistics, present-day statistics (its fields of application and its organization in other countries and in the international sphere) and statistics in the Dominican Republic. The second session is designed to explain statistical methodology, with a program adapted to the limited mathematical background of the students. The third session is devoted to statistics applied to the territory, population, economics and government.

Throughout the three sessions, the courses are supplemented once every two weeks with seminars and laboratory periods. The laboratory work takes place in the offices of the General Bureau of Statistics, with the aid of the chiefs of the corresponding sections and with the use of the Bureau's material and mechanical equipment.

Actividades del Consejo de Estadística

• El 31 de octubre de 1947, fué instalado el Consejo Nacional de Estadística. La primera realización de este nuevo organismo consistió en la organización de la Oficina de Estadística del Consejo Administrativo del Distrito de Santo Domingo, la cual inició sus labores a partir del 1 de enero de 1948. (Fuente: Eduardo de Castro, DGE, Ciudad Trujillo.)

Cursos de estadística de la Universidad Nacional

• El programa para los cursos de estadística en la Facultad de Filosofía, ha sido preparado teniendo en cuenta, no solo el propósito de servir como un elemento de cultura general para los estudiantes inscritos en la Facultad, sino también para servir a los estudiantes libres integrados por empleados de los servicios de estadística, aspirantes a empleos en dichos servicios y alumnos inscritos en otras facultades. Los estudios se dividen en tres trimestres. En el primero se dictan clases sobre los orígenes de la estadística, la estadística en la actualidad (sus campos de aplicación, su organización nacional en el exterior y en la esfera internacional) y la estadística en la República Dominicana. El segundo trimestre se destina a la exposición de la metodología estadística, dentro de un programa adaptado a la limitada preparación matemática del alumnado. En el tercer trimestre el programa se ocupa de la estadística aplicada al territorio, población, economía y organización del Estado.

Los estudios se complementan con seminarios y prácticas quincenales durante los tres trimestres. Las prácticas se realizan en las oficinas de la Dirección General de Estadística, auxiliadas por los jefes de las secciones correspondientes y por el material y equipos mecánicos. (Fuente:

(Source: Eduardo de Castro, GBS, Ciudad Trujillo.)

Eduardo de Castro, DGE, Ciudad Trujillo.)

ECUADOR

Standard foreign trade classification

• The Ecuadorian delegation to the First Session of the IASI, held in September 1947, presented three documents showing what has been done in Ecuador towards the adoption of the Minimum List for classification of foreign trade statistics. These works, prepared by Carlos Procaccia, are *Indice Nacional de Conversión para el Ecuador; Guía para la Clasificación de las Mercancías en las Estadísticas del Comercio Internacional según el "Basic Classification Scheme" del IASI;* and *Clasificación del Arancel de Aduanas del Ecuador según la Lista Minimum de Mercancías para las Estadísticas del Comercio Internacional.*

The *Indice Nacional de Conversión para el Ecuador* (National Convertibility Index of Ecuador) is of a provisional character, awaiting further corrections and additions. Classification is made by sections, chapters, items, subitems, and fractions, showing the code numbers under the customs tariff of Ecuador.

The second work, *Guía para la Clasificación de las Mercancías en las Estadísticas del Comercio Internacional según el "Basic Classification Scheme" del IASI* (Guide for the Classification of Foreign Trade Commodities according to the IASI "Basic Classification Scheme"), was published by the Central Bank of Ecuador as a contribution to the First Session of the IASI. It consists of a collection of notes on the Minimum List and the Draft Customs Nomenclature and their application to the foreign trade statistics of Ecuador.

The third contribution, published in July 1945 as No. 2 of the "Cuadernos de Estadística" of the General Bureau of Statistics and Census, pre-

Clasificación standard del comercio exterior

• La delegación ecuatoriana a la Primera Sesión del IASI, celebrada en septiembre de 1947, presentó tres documentos sobre lo hecho en el Ecuador en el campo de la adopción de la Lista Mínima para la clasificación de la estadística del comercio exterior. Estos trabajos son: *Indice Nacional de Conversión para el Ecuador; Guía para la Clasificación de las Mercancías en las Estadísticas del Comercio Internacional según el "Basic Classification Scheme" del IASI; y Clasificación del Arancel de Aduanas del Ecuador según la Lista Mínima de Mercancías para las Estadísticas del Comercio Internacional,* los dos últimos por Carlos Procaccia.

El *Indice Nacional de Conversión para el Ecuador* tiene un carácter provisional, en espera de posteriores correcciones y complementaciones. La clasificación se hace por secciones, capítulos, items, subitems y fracciones, con referencia al número de codificación de acuerdo con el arancel de aduanas del Ecuador.

La segunda obra, *Guía para la Clasificación de las Mercancías en las Estadísticas del Comercio Internacional según el "Basic Classification Scheme"* del IASI, fué editada por el Banco Central del Ecuador, como contribución a la Primera Sesión del IASI, y contiene un conjunto de notas sobre la "Minimum List" y la "Draft Customs Nomenclature" y su aplicación a las estadísticas del comercio exterior ecuatoriano.

La tercera contribución, editada en julio de 1945 como el No. 2 de los "Cuadernos de Estadística" de la Dirección General de Estadística y Censos, presenta una traducción de la Lista Mínima de Mercancías para

sents a translation of the League of Nations' *Minimum List of Commodities for International Trade Statistics* and its analytical application to the customs tariff of Ecuador. (Source: Documents presented to First Session of IASI.)

las Estadísticas del Comercio Internacional de la Sociedad de las Naciones, y su aplicación analítica al arancel de aduanas del Ecuador. (Fuente: Documentos presentados a la Primera Sesión del IASI.)

Personal notes—Noticias personales

• *Sr. Luis F. López Muñoz*, former subdirector, Dirección General de Estadística y Censos, Ministerio de Economía, was appointed director general de estadística in November 1947. At the time of the appointment, Sr. López was in the United States on a training grant from the U. S. Bureau of the Census, under the State Department Cooperative Program. He returned to Ecuador late in November. As director general, Sr. López has been named as an ex officio member of the IASI.

GUATEMALA

National Livestock Census

• The President of the Republic by Decree of October 7, 1947, directed that the First National Livestock Census be taken. By this decree, and subject to instructions from the Ministry of Economy and Labor, the General Bureau of Statistics was charged with the direction, organization, and execution of the Census. To act in an advisory capacity to the Ministry of Economy, the creation of a National Committee on the Livestock Census was decreed, composed of the minister of economy, the director general of statistics, and the director general of livestock. The Census was undertaken principally to determine the number of livestock on hand, classified by sex and age, by class and breed, and its distribution throughout the Republic. The decree put all national and municipal officials under obligation to co-operate in the preliminary work and in taking the Census. This decree was followed by another one dated October 10, 1947, regulating the execution of the Census. (Source: Raúl Sierra Franco, GBS, Guatemala.)

Censo Ganadero Nacional

• El Presidente de la República por Acuerdo del 7 de octubre de 1947 dispuso el levantamiento del Primer Censo Ganadero Nacional. El acuerdo encargó a la Dirección General de Estadística de la dirección, organización y ejecución del Censo, conforme a las instrucciones que dictara el Ministerio de Economía y Trabajo. Para asesorar al Ministerio de Economía se ordenó la creación de una Comisión Nacional del Censo Ganadero, integrada por el ministro de economía, el director general de estadística y el director general de ganadería. El Censo fué proyectado con la finalidad principal de conocer la cantidad de ganado existente, clasificado por sexos y edades, por especies y selección de razas, todo esto distribuido en el mapa de la República. El acuerdo determinó la obligación por parte de todos los funcionarios nacionales y municipales de cooperar en los trabajos previos y en el levantamiento del Censo. A este acuerdo siguió otro de fecha 10 de octubre de 1947, reglamentando la realización del Censo. El Censo fué levantado en noviembre de 1947. (Fuente: Raúl Sierra Franco, DGE, Guatemala.)

Balance of payments

• The Bank of Guatemala has published the country's computation of its international balance of payments, for the year 1946. The structure of the balance of payments has been divided into four large items: Current operations, operations of capital, changes in the gold reserves and foreign exchange balances, and residual balance.

The current operations are separated into merchandise (imports and exports), and services, and the latter into consular and diplomatic services, institutional contributions, movie and actors' royalties, remittances (for relatives and students), interest and dividends (external debt and private enterprises), various government services, insurance services, tourism, banking commissions and other services.

The operations of capital are classified into short-term and long-term operations. The changes in the gold and currency reserves include the details of gold, currency, and values in foreign countries realizable in foreign currency. Freight and maritime insurance are included in the merchandise account. (Source: *Balanza de Pagos Internacionales de Guatemala por el Año* 1946, June 30, 1947, Guatemala.)

Balanza de pagos

• El Banco de Guatemala ha publicado el primer cálculo de la balanza de pagos internacionales de dicho país correspondiente al año 1946. La estructura de la balanza de pagos se ha dividido en cuatro grandes renglones: Operaciones corrientes, operaciones de capital, cambios en las reservas de oro y divisas, y saldo no controlado.

Las operaciones corrientes se discriminan en mercancías (importaciones y exportaciones), y servicios. Los servicios se clasifican en servicio diplomático-consular, contribuciones institucionales, regalías cinematográficas y artistas de teatro, remesas (familiares y de estudiantes), interés y dividendos (deuda externa y empresas privadas), servicios varios del gobierno, servicios de seguros, turismo, comisiones bancarias y otros servicios.

Las operaciones de capital se clasifican en: A corto plazo y a largo plazo. Los cambios en las reservas de oro y divisas comprenden los detalles de oro, divisas y valores en el extranjero realizables en divisas. Los servicios de fletes y seguros marítimos se incluyen en la cuenta de mercancías. (Fuente: *Balanza de Pagos Internacionales de Guatemala por el Año* 1946, junio 30, 1947, Guatemala.)

MEXICO

Recent statistical activities

• Some general aspects of preparation for the forthcoming censuses of 1950 are being studied, and some basic details of preliminary projects are being worked out, in particular the formulation of census lists in 1949. The compilation of data for the territoritorial division for census purposes is under way.

• Publication of the results of the Industrial Census of 1940 has been completed, and new editions are in

Actividades estadísticas recientes

• Se están estudiando algunos aspectos generales concernientes a la preparación de los próximos censos de 1950, y algunas particularidades básicas de los trabajos previos, o sea la formación de padrones en 1949. Se está efectuando la recopilación de datos para llevar a cabo la división territorial de la República con fines censales.

• Se dió por terminada la publicación de los resultados del Censo Industrial

press of some leaflets on the population census of the same year, containing data by federal districts.

• In the process or revision, for publication, are data of the municipal population of the Republic and the study "Medidas Regionales" (Regional Measures), adapted to present conditions in the country. (Source: Gilberto Parra B., GBS, Mexico.)

de 1940, y están en prensa nuevas ediciones de algunos folletos del censo de población del mismo año, por entidades federativas.

• Actualmente se revisan, para darse a la publicidad, los datos de la población municipal de la República, así como el material para una edición del estudio "Medidas Regionales," adaptado a las condiciones actuales del país. (Fuente: Gilberto Parra B., DGE, México.)

Personal notes—Noticias personales

• *Sr. Ramón Beteta*, ministro de hacienda and president of the IASI, was appointed chairman of the Committee on Economic Development at the United Nations Conference on Trade and Employment, which opened in Havana in November 1947. The Committee on Economic Development was one of the six committees selected to consider for final action the six chapters of the draft charter for the proposed International Trade Organization, adopted in Geneva.

NICARAGUA

Personal notes—Noticias personales

• *Sr. Enrique Lanzas H.*, former jefe, Sección de Censos y Catastro, Dirección General de Estadística, was appointed director general interino de estadística in November 1947. The former director general, *Lic. Carlos Rivas Opstaele*, accepted the position of gerente de la Compañía Mercantil de Ultramar. Sr. Lanzas H. was designated ex officio member of the IASI while acting as director general.

PANAMA

Housing Census in Panama City

• The first partial results (from the Marañón sector) of the Census and Evaluation of Housing in Panama City, sponsored and conducted by the Bank for Urbanization and Rehabilitation, are now available. The methods of research used are an adaptation of the procedures developed by the Committee on the Hygiene of Housing of the American Public Health Association, of the United States.

The principal objective of the Census is three-fold: The determining of housing conditions and prob-

Censo de la Vivienda en la Ciudad de Panamá

• Han sido dados a conocer los primeros resultados parciales (área de Marañón) del Censo y Evaluación de la Vivienda en la Ciudad de Panamá, auspiciado y conducido por el Banco de Urbanización y Rehabilitación. El procedimiento de investigación consiste en una adaptación del desarrollado por el "Committee on the Hygiene of Housing of the American Public Health Association," en los Estados Unidos.

El objetivo principal del Censo es triple: La determinación de las condiciones de la vivienda y sus pro-

lems, urban and housing planning, and the establishment of a permanent housing inspection system. (Source: Programa para un Censo y Evaluación de la Vivienda de la Ciudad de Panamá, New York, 1947.)

blemas, la planificación urbana y de la vivienda y el establecimiento de un sistema permanente de inspección de la vivienda. (Fuente: Programa para un Censo y Evaluación de la Vivienda de la Ciudad de Panamá, New York, 1947.)

PARAGUAY

Foreign trade statistical classification

• The Paraguayan delegation to the First Session of the IASI, held in September 1947, contributed a document entitled *Indices Alfabético y Numérico para la Estadística del Comercio Exterior* (second edition), prepared under the direction of Mr. Thomas F. Corcoran, and published by the General Bureau of Statistics. The classification is based on the *Minimum List of Commodities for International Trade Statistics* prepared in 1938 by the Committee of Statistical Experts of the League of Nations, and on the Draft Customs Nomenclature approved by the League in 1937. The classification contains 6000 descriptions and represents the results of a study of some 35,000 articles described in the customs declarations of the General Customs Bureau. The articles are classified according to the items of the Minimum List, following the plan outlined in the *Convertibility Index for Foreign Trade Statistical Classifications of the American Nations* of the IASI. (Source: Carlos A. Soler, GBS, Asunción.)

Clasificación de la estadística del comercio exterior

• La delegación paraguaya a la Primera Sesión del IASI celebrada en septiembre de 1947, ofrenció la contribución del documento titulado *Indices Alfabético y Numérico para la Estadística del Comercio Exterior*, preparados bajo la dirección del Sr. Thomas F. Corcoran, y publicados en segunda edición, por la Dirección General de Estadística. La clasificación está basada en la *Lista Mínima de las Mercancías para Estadísticas del Comercio Exterior*, preparada en 1938 por el Comité de Expertos Estadísticos de la Sociedad de las Naciones, y en la Nomenclatura Arancelaria Provisional aprobada por la Sociedad en 1937. La clasificación contiene unas 6.000 descripciones, y representa los resultados de un estudio de unos 35.000 artículos descritos en los manifiestos de la Dirección General de Aduanas. Los artículos se clasifican según los rubros de la Lista Mínima, siguendo el plan de trabajo indicado en el *Convertibility Index for Foreign Trade Statistical Classifications of the American Nations* del IASI. (Fuente: Carlos A. Soler, DGE, Asunción.)

PERU

Recent statistical activities

• Preliminary studies are underway for the investigation of the Economic Potential of the nation and for the Agricultural and Industrial Censuses, in preparation for the 1950

Actividades estadísticas recientes

• Están en plena ejecución los estudios preliminares para la investigación del Potencial Económico de la Nación, Censo Agropecuario y Censo Industrial, con destino al levanta-

population and agricultural censuses.

• The second and third volumes of the National Occupational and Population Census of 1940 have been published. These volumes contain data for the Departments of Tumbes, Piura, and Cajamarca, and Lambayeque, Libertad and Ancash, respectively. (Source: Enrique L. Marquina P., NBS, Lima.)

miento de los censos de población y agropecuario de 1950.

• Ha sido editado el segundo y tercer volumen del Censo Nacional de Población y Ocupación realizado en 1940. Estos volúmenes contienen los resultados estadísticos departamentales de Tumbes, Piura y Cajamarca, y Lambayeque, Libertad y Ancash, respectivamente. (Fuente: Enrique L. Marquina P., DNE.)

UNITED STATES

American Statistical Association Meeting

• The 107th meeting of the American Statistical Association was held in New York City on December 28, 29, and 30, 1947. About thirty sessions were held during the three days covering such topics as international problems in health and vital statistics, operational research and other military applications of statistics, industry statistics, statistics as used by life insurance companies, the teaching of statistics, etc. A display of graphic materials and of publications was of considerable interest to those attending the sessions.

Of particular interest is the formation of a new section of the Association, on Training in Statistics. At two sessions, the topic of training was discussed very fully. Dr. Snedecor of Iowa State College presented a stimulating paper outlining a syllabus of a proposed course of basic statistics, and various reports on training, including those prepared by the IASI, were summarized. After these discussions, considerable interest was expressed and the first steps were taken to organize a specialized sec-

Reunión de la Asociación Americana de Estadística

• Del 28 al 30 de diciembre de 1947, tuvo lugar en Nueva York la 107ma reunión de la Asociación Americana de Estadística. Se celebraron alrededor de 30 sesiones durante los tres días, abarcando temas tales como problemas internacionales en el campo de las estadísticas de la salud y demográficas, estudios sobre operaciones militares y otras aplicaciones militares de la estadística, estadísticas industriales, estadísticas empleadas por las compañías de seguro de vida, la enseñanza estadística, etc. Fué presentada una exposición de materiales gráficos y de publicaciones que ofreció un gran interés a los asistentes.

Tuvo particular importancia el establecimiento dentro de la Asociación de una nueva sección sobre Enseñanza Estadística. El tópico de la enseñanza fue discutido muy extensamente en dos sesiones. El Dr. Snedecor de la Universidad del Estado de Iowa presentó un documento en donde se bosqueja el resumen de un curso de estadística básica, y fueron presentados varios informes breves sobre enseñanza, incluyendo los preparados por el IASI. A continuación de estas discusiones, se manifestó un gran interés y se dieron los primeros pasos en pro de la organización de una sección especial sobre enseñanza den-

tion of the American Statistical Association on training.

Officers elected for the year 1948 included George W. Snedecor of Iowa State College, president; Willard L. Thorp, Department of State, and Frederick F. Stephan, Princeton University, directors for a three-year term; and, as the four new vice presidents, A. Ford Hinrichs, Kiplinger Magazine; Rensis Likert, Survey Research Center, University of Michigan; Abraham Wald, Columbia University; and Harry R. Wellman, Giannini Foundation of Agricultural Economics, University of California. (Source: American Statistical Association, Washington, D. C.)

Seventeenth decennial census of population

• The Director of the Census appointed three special technical advisory committees for the seventeenth decennial census of population. The committees are expected to advise the Census Bureau concerning items to be included in the questionnaire which will be used in 1950 and to review the recommendations of groups sponsoring the inclusion of various questions on the census schedule. They are expected, also, to give advice regarding plans for the publication of the results of the census.

Members of the committees were selected on the basis of their technical competence in the designated field rather than as official representatives of the organizations with which they are associated. The Census Advisory Committee of the American Statistical Association has an official representative on each technical committee, however, since it will review the recommendations of these committees. The views of interested Federal agencies will be obtained in part through various interdepart-

tro de la Asociación Americana de Estadística.

Se eligieron los siguientes funcionarios para el año 1948: George W. Snedecor de la Universidad del Estado de Iowa, como Presidente; Willard L. Thorp, del Departamento de Estado, y Frederick F. Stephan, de la Universidad de Princeton, como Directores por el término de 3 años; y A. Ford Hinrichs, de la Revista Kiplinger, Rensis Likert, del Centro de Estudios sobre Investigaciones, de la Universidad de Michigan, Abraham Wald, de la Universidad de Columbia, y Harry R. Wellman, de la Fundación Giannini de Economía Agrícola, Universidad de California, como nuevos vicepresidentes. (Fuente: Asociación Americana de Estadística, Wáshington, D. C.)

Decimoséptimo censo decenal de población

• El Director del Censo nombró tres comités técnicos consultivos especiales para el decimoséptimo censo decenal de población. Se aspira a que los comités aconsejen a la Dirección del Censo en cuanto a los items que se incluyan en los cuestionarios que han de usarse en 1950, y en la revisión de las recomendaciones de los grupos que auspician la inclusión de diversas preguntas en la boleta censal. Del mismo modo, se busca consejo respecto a los planes de publicación de los resultados del censo.

La elección de los miembros fué hecha con base en sus capacidades técnicas en este campo, más que con base en la representación oficial de las organizaciones con las que están vinculados. El Comité Consultivo sobre Censos de la Asociación Americana de Estadística, cuenta con un representante oficial en cada comité técnico, en atención a que aquel revisará las recomendaciones de los citados comités. Se obtendrá la participación de las agencias federales

mental committees and in part through the Bureau of the Budget.

The three technical advisory committees cover population statistics, housing statistics, and economic statistics. The Technical Advisory Committee on Population Statistics held its first meeting January 23-24, 1948. (Source: Population Division, Bureau of the Census, Washington, D. C.)

Tabulation of bank assets and liabilities

• As the result of a co-operative arrangement by the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation, a single tabulation of the assets and liabilities of all operating banks in the United States and possessions as of June 30, 1947, has been compiled by the Federal Deposit Insurance Corporation. This series will take the place of the three series previously compiled and published independently by these agencies.

The tabulation includes the assets and liabilities for all operating banks and also for three groups of banks, including: Commercial and stock savings banks; mutual savings banks; and trust companies not regularly engaged in deposit banking. It covers the United States and possessions. Tabulations by States will be made available in the near future. (Source: Release from Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation, Washington, D. C.)

interesadas, en parte, a través de los distintos comités interdepartamentales y, en parte, a través de la Dirección del Presupuesto.

Los tres Comités Técnicos Consultivos se refieren a las estadísticas de la población, las estadísticas de la vivienda y las estadísticas económicas. El Comité Técnico Consultivo sobre Estadísticas de la Población celebrará su primera reunión el 23 y 24 de enero, de 1948. (Fuente: División de Población, Dirección del Censo, Wáshington, D, C.)

Tabulación de los activos y pasivos bancarios

• Como resultado de un acuerdo cooperativo entre la Oficina del Contralor del Circulante Monetario, la Junta de Gobernadores del Sistema de la Reserva Federal y la Corporación Federal de Seguros sobre Depósitos, esta última entidad ha elaborado una tabulación global de los activos y pasivos de todos los bancos que operan en los Estados Unidos y sus posesiones, en junio 30 de 1947. Esta serie sustituirá las tres series previamente compiladas y publicadas por separado por las tres agencias mencionadas. La nueva serie es más completa en cuanto al campo investigado y substancialmente comparable con las series antiguas.

La tabulación incluye los activos y pasivos de todos los bancos en actividad y al mismo tiempo para los tres grupos de bancos, abarcando: Bancos comerciales y de ahorro; Bancos de ahorro mutuo; y trust que regularmente no reciben depósitos bancarios. Cubre los Estados Unidos y sus posesiones. En la próxima edición se dispondrá de tabulaciones por Estados. (Fuente: Información de la Oficina del Contralor del Circulante Monetario, Junta de Gobernadores del Sistema de la Reserva Federal y Corporación Federal de Seguros sobre Depósitos, Wáshington, D. C.)

Conference on Research in Income and Wealth

• The Conference on Research in Income and Wealth held its annual meeting on January 30 and 31, 1948, in New York City. The topic of discussion was national wealth measurement. Leading the discussion were Marvin Hoffenberg of the Bureau of Labor Statistics, Martin Bronfenbrenner of the University of Wisconsin, and Gardiner C. Means and Homer Jones, both of the Committee for Economic Development. The meeting was attended by over one hundred economists representing government, universities, research organizations, and private industry. (Source: National Bureau of Economic Research, Inc., New York.)

Conferencia sobre Investigación de la Renta y la Riqueza

• La Conferencia sobre Investigación de la Renta y la Riqueza celebró su reunión anual el 30 y 31 de enero de 1948, en la ciudad de Nueva York. El cálculo de la riqueza nacional constituyó el tema de la reunión. Dirigieron la discusión los señores Marvin Hoffenberg de la Dirección de Estadísticas del Trabajo, Martin Bronfenbrenner de la Universidad de Wisconsin, y Gardiner C. Means y Homer Jones del Comité de Fomento Económico. Asistieron a la reunión más de cien economistas en representación del gobierno, las universidades, organismos de investigación y la industria privada. (Fuente: Oficina Nacional de Investigación Económica, Inc., Nueva York.)

Personal notes—Noticias personales

• *Dr. W. Edwards Deming*, advisor on sampling, Bureau of the Budget, has been named a member of the Board of Directors of the Institute of Statistics for the Consolidated University of North Carolina.

• *Dr. Halbert L. Dunn*, chief, National Office of Vital Statistics, and secretary general of the IASI, attended the Second Session of the Expert Committee for the Preparation of the Sixth Decennial Revision of the International Lists of Diseases and Causes of Death, held in Geneva, October 21-29, 1947. Dr. Dunn was there as adviser to the Committee on Joint Causes.

• *Mr. Lester S. Kellog*, former chief, Prices and Cost of Living Branch, Bureau of Labor Statistics, accepted a position in private industry at the end of 1947. He was succeeded by *Edward D. Hollander*, who was formerly chief of the Labor Economics Staff in the Bureau of Labor Statistics.

URUGUAY

Revista de Economía

• In August 1947 the publication of the *Revista de Economía* was begun in Montevideo. The first issue contains a series of important articles, among them: "Hacia la Construcción de una Dinámica Económica," por Luis A. Faroppa; "La Teoría de las Finanzas," por Dino Jarach; "Algunas Consideraciones sobre el Proyecto

Revista de Economía

• En agosto de 1947 se inició en Montevideo la publicación de la *Revista de Economía*. El primer número contiene una serie de artículos de importancia, entre ellos: "Hacia la Construcción de una Dinámica Económica," por Luis A. Faroppa; "La Teroría de las Finanzas," por Dino Jarach; "Algunas Consideraciones

de Carta para la Organización Internacional del Comercio de las Naciones Unidas," por Julio Giuria. In this issue there was started a series entitled "Algunos Elementos para el Estudio de la Conjuntura Nacional" (Some elements for the study of the National Economy), by Fermín C. Boado. There is also a broad section "Documentos" which includes national and foreign legislation, international agreements, jurisprudence, etc. (Source: *Revista de Economía*, agosto 1947, Montevideo.)

sobre el Proyecto de Carta para la Organización Internacional del Comercio de las Naciones Unidas," por Julio Giuria. En el mismo número se empezó a publicar la serie titulada "Algunos Elementos para el Estudio de la Conjuntura Nacional," por Fermín C. Boado. Presenta además una amplia sección "Documentos" la cual se refiere a legislación nacional y extranjera, convenios internacionales, jurisprudencia, etc. (Fuente: *Revista de Economía*, agosto 1947, Montevideo.)

Personal notes—Noticias personales

• *Sr. Enrique Grassi Clerici*, jefe, División de Estadística del Comercio Exterior, Dirección General de Aduanas, Ministerio de Hacienda, left the United States in January 1948 to return to Uruguay. Sr. Grassi came to the States in May 1946 under the IASI Program for Interchange of Statistical Technicians. Following his 1-year stay with the IASI, he spent several months in the U. S. Census Bureau where he completed a study on the types of data published as the results of population censuses, including methods of cross tabulation of population characteristics in various countries.

• *Prof. Agustín Rouano Fournier*, former director del Seminario de Economía Política, y profesor agregado de economía política, Facultad de Derecho y Ciencias Sociales, Universidad de Montevideo, passed away in November 1947. Prof. Rouano Fournier was a lawyer and a teacher of political economy and social studies. He held memberships in the Scientific Institute of Economic and Social Research, the Société de Statistique de Paris, and the Universidad Central Americana. In May 1947 he was named a member of the Honorary Advisory Committee on the National Census of Uruguay

VENEZUELA

Section of Agricultural Research

• The Administrative Board of the Agricultural and Livestock Bank authorized its Statistical Department to organize a Section of Agricultural Research, designed to study the conditions and characteristics of the agricultural economy of Venezuela. At present, the new Section is setting up the card file necessary for recording the permanent information already obtained from regular surveys, on planting and harvesting seasons, yield per hectare, the equivalence of measures, and other characteristics

Sección de Investigaciones Agrarias

• La Junta Administrativa del Banco Agrícola y Pecuario, autorizó a su Departamento de Estadística para que iniciara la organización de una Sección de Investigaciones Agrarias, destinada a estudiar las condiciones y características de la economía agraria venezolana. En la actualidad, la nueva Sección se ocupa de organizar los ficheros necesarios para el registro de las investigaciones ya realizadas, de carácter permanente, como épocas de siembra y de recolección de las cosechas, rendimiento por

typical of the productive regions of the country, and for succeeding entries of the variable data, such as agricultural prices, crop predictions, production costs, etc. (Source: Agricultural and Livestock Bank, Caracas.)

Recent statistical activities

• On October 16, 1947, the School of Statistical Preparation began its 1947-48 school year for elementary and secondary statistical courses. There were 85 students enrolled in the elementary course and 18 in the secondary course.

• The *Anuario Estadístico de Venezuela* for 1945 and the volume *Estadística Mercantil y Marítima* of 1944 have been released.

• To obtain more recent figures on Venezuelan foreign trade than those published in the periodical *Estadística Mercantil y Marítima*, the General Bureau of Statistics and the Ministry of Finance are co-operating in the preparation of preliminary statistics on principal products imported. Preparation of this information has been in process since October 1947. (Source: Manuel Felipe Recao, GBS, Caracas.)

hectárea, equivalencia de las medidas y otras características típicas de las regiones productoras del país, y para el asiento sucesivo de los datos de naturaleza variable como los precios agrícolas, pronóstico de cosechas, costos de producción, etc. (Fuente: Banco Agrícola y Pecuario, Caracas.)

Actividades estadísticas recientes

• Con fecha 16 de octubre de 1947, la Escuela de Preparación Estadística dió apertura al año escolar 1947-48 de los cursos elemental y secundario de estadística, teniendo una inscripción de 85 alumnos para el curso elemental y 18 para el secundario.

• Fueron puestos a la circulación el *Anuario Estadístico de Venezuela* correspondiente a 1945 y el volumen *Estadística Mercantil y Marítima* de 1944.

• Con objeto de obtener cifras más recientes que las que se dan a conocer en la publicación periódica *Estadística Mercantil y Marítima* relacionada con el comercio exterior venezolano, la Dirección General de Estadística convino con el Ministerio de Hacienda en la elaboración de una estadística provisional de las importaciones que abarque los principales productos de la importación. Esta información ha comenzado a preparase desde octubre de 1947. (Fuente: Manuel Felipe Recao, DGE, Caracas.)

Personal notes—Noticias personales

• *Sr. Vicente González H.*, presidente, Sociedad Venezolana de Estadística, has been designated as an ex officio member of the IASI.

PUBLICATIONS—PUBLICACIONES

JOURNALS OF INTEREST TO STATISTICIANS
REVISTAS DE INTERES PARA ESTADISTICOS

Principal journals of societies and universities in which statistical methods have received especial attention.—Principales revistas de sociedades y universidades en las que los métodos estadísticos han recibido especial atención.

The American Economic Review. The journal of the American Economic Association. 1911- . Five issues a year. Evanston, Illinois. (*Am. Econ. Rev.*)

American Sociological Review. The official journal of the American Sociological Society. 1936- . Bimonthly. Minneapolis, Minnesota. (*Am. Soc. Rev.*)

Anales de Economía y Estadística. Revista de la Contraloría General de la República. 1938- . Bogotá. Organo del Instituto Nacional de Estadística de Colombia. (*An. Econ. Estad.*)

The Annals of Mathematical Statistics. The official journal of the Institute of Mathematical Statistics. 1930- . Quarterly. Baltimore, Maryland. (*An. Math. Stat.*)

Biometrika. A journal for the statistical study of biological problems. 1913- . Quarterly. London. (*Biometrika.*)

Boletín de la Sociedad Mexicana de Geografía y Estadística. 1839- . Irregular. México, D. F. (*Bol. Soc. Mex. Geo. Estad.*)

The Canadian Journal of Economics and Political Science. The journal of the Canadian Political Science Association. 1935- . Quarterly. Toronto. (*Can. Jour. Econ. Pol. Sci.*)

Econometrica. Journal of the Econometric Society, an international society for the advancement of economic theory in its relation to statistics and mathematics. 1933- . Quarterly. Chicago, Illinois. University of Chicago. (*Econ.*)

Economía. Revista de la Facultad de Economía y Comercio. 1939- . Mensual. Santiago. Universidad de Chile. (*Economía.*)

Estadística Peruana. Publicación del Instituto Peruano de Estadística. 1945- . Trimestral. Lima. (*Estad. Perú.*)

Journal de la Société Statistique de Paris. 1860- . Bimestriel. Paris. (*Bul. Soc. Stat. de Paris.*)

Journal of the American Statistical Association. 1888-89— . Quarterly. Washington, D. C. (*Jour. A.S.A.*)

Journal of the Royal Statistical Society. 1838-39— . Quarterly. London, England. (*Jour. Royal Stat. Soc.*)

Mathematical Reviews. 1940- . Monthly. Lancaster, Pennsylvania. American Mathematical Society. (*Math. Rev.*)

Metron. Revista internazionale di statistica. 1920- . Quarterly. Roma. R. Universita. Instituto di Statistica. (*Metron.*)

Population Index. 1935- . Quarterly. Princeton, New Jersey. School of Public Affairs, Princeton University, and the Population Association of America, Inc. (*Pop. Ind.*)

The Review of Economic Statistics. 1919- . Quarterly. Cambridge, Massachusetts. Harvard University. Committee on Economic Research. (*Rev. Econ. Stat.*)

Revista Brasileira de Estatística. Orgão oficial do Conselho Nacional de Estatística e da Sociedade Brasileira de Estatística. 1940- . Trimestral. Rio de Janeiro. Instituto Brasileiro de Geografia e Estatística. (*Rev. Bras. Est.*)

Revista de Ciencias Económicas. Publicación de la Facultad de Ciencias Económicas, Centro de Estudiantes y Colegio de Graduados. 1913- . Mensual. Buenos Aires, Argentina. Universidad de Buenos Aires. (*Rev. Cien. Econ.*)

Revista de Economía Argentina. Publicación mensual del Instituto Alejandro E. Bunge de Investigaciones Económicas y Sociales. 1918- . Buenos Aires. (*Rev. Econ. Arg.*)

Revista de la Facultad de Ciencias Económicas. Lima, Perú. Universidad Mayor de San Marcos. (*Rev. Fac. Cien. Econ.*)

Revista de la Facultad de Ciencias Económicas, Comerciales y Políticas. 1926- . Trimestral. Rosario, Argentina. Universidad Nacional del Litoral. Facultad de Ciencias Económicas, Comerciales y Políticas. (*Rev. Fac. Cien. Econ. Com. Pol.*)

Revista de la Facultad de Ciencias Económicas y de Administración. 1940- . Irregular. Montevideo, Uruguay. Universidad de Montevideo. (*Rev. Fac. Cien. Econ. Admin.*)

Revue de l'Institut International de Statistique. 1933- . Trimestrielle. La Haye. (*Rev. de l'Inst. Int. de Stat.*)

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BIBLIOGRAPHY—BIBLIOGRAFIA

This bibliography is a quarterly supplement to the IASI *Bibliography of Selected Statistical Sources of the American Nations*, May 1947. It includes statistical material drawn from the journals listed above; official publications reported in response to quarterly questionnaires; and publications from other sources. The classification is by the following broad subject groups: General; census; statistical science; geography; demography, economics; health and cultural statistics; government and political statistics; labor and living conditions. The call numbers used in the 1947 Bibliography, composed of the country abbreviation and the decimal subject number, are given in parentheses following each entry.

Esta bibliografía es un suplemento trimestral a la *Bibliografía de Fuentes Estadísticas Escogidas de las Naciones Americanas*, mayo 1947, del IASI. Incluye materiales estadísticos obtenidos de las revistas arriba mencionadas, de publicaciones oficiales de las que se recibió noticia en las respuestas a los cuestionarios trimestrales del IASI, y publicaciones de otros orígenes. La clasificación está hecha en los siguientes amplios grupos de materias: General; censos; ciencia estadística; geografía; demografía; economía; estadísticas de salubridad y cultura; estadísticas gubernamentales y políticas; condiciones de trabajo y de vida. Los números indicadores que se usaron en la Bibliografía editada en 1947, formados por la abreviatura del país y el número decimal de la materia, aparecen entre paréntesis al final de cada referencia.

GENERAL

Int *Esquema de Clasificación por Materias Estadísticas.* Preimpresión de *Bibliografía de Fuentes Estadísticas Escogidas de las Naciones Americanas*, mayo de 1947. Washington, D. C., 1947. Instituto Interamericano de Estadística. 21 p.
Publicado también en inglés. (Int-*1200*.B7.)

Int *Subject Classification Scheme for Statistical Materials.* Preprint from *Bibliography of Selected Statistical Sources of the American Nations*, May 1947. Washington, D.C., 1947. Inter American Statistical Institute. 18 p.
Published also in Spanish. (Int-*1200*.B7.)

Bras *Anuário Estatístico do Brasil, Ano VII*-1946. Rio de Janeiro, Serviço Gráf. do IBGE, 1947. Instituto Brasileiro de Geografia e Estatística. Conselho Nacional de Estatística. 533 p. Estatísticas Brasileiras, no. 2.
Conteúdo: Situação física; situação demografica; situação econômica; situação social; situação cultural; situação administrativa e política. (Bras-*1410*.A5.)

Can "Features of Present-Day Canada." Edited by Robert Hamilton Coats. *The Annals of the American Academy of Political Science*, vol. 253, September 1947. 266 p.
Entire issued dedicated to the above subject. Articles classified under the following headings: National resources; government and politics; industry and labor; finance and trade; social and cultural features. (USA-*3040*.A5.)

Chile *Estadística Chilena: Sinoposis 1946.* Santiago, Imp. y Lit Universo, S.A., 1947. Dirección General de Estadística, p. 677-826. (Chile-*1420*.E5.)

CR *Anuario Estadístico, Año 1943.* Tomo cuadragésimoséptimo. San José, Imp. Nacional, 1947. Dirección General de Estadística. 352 p.
Contiene: Exportación; importación; demografía; cabotaje; balanza commercial; ganadería; censos locales; censos generales de población; movimiento turístico; tráfico ferrocarrilero; sección industrial; estadística producción agrícola; carreteras; personal. (CR-*1410*.A.5)

Méx *Compiendo Estadístico, 1947.* México, D.F., Tall. Gráf de la Nación, enero 1947. Secretaría de la Economía Nacional. Dirección General de Estadística. 588 p.
Contenido: Población; educación: asistencia social; delincuencia; trabajo; índices de precios y costo de la vida; agricultura; industria; comunicaciones y transportes; finanzas; apéndice. (Méx-*1410*.C5.)

Par *Anuario Estadístico de la República del Paraguay, 1943-1944.* Asunción, Imp. Nacional, 1946. Ministerio de Hacienda. Dirección General de Estadística. 296 p.
Contenido: Climatología; demografía; economía y finanzas; agricultura; ganadería; industria; emisión, bancos y registro de la propiedad; precios de los artículos de primera necesidad y cálculo del costo de la vida; finanzas públicas; comunicaciones; salud pública; instrucción pública; movimiento judicial, policial y carcelario; municipalidades. (Par-*1410*.A5.)

Ven *Anuario Estadístico de Venezuela, 1945.* Caracas, Editorial Grafolit, 1947. Ministerio de Fomento. Dirección General de Estadística. 547 p.
Contiene: Territorio y meteorología; estado y movimiento de la población; producción y consumo; precios e índices económicos; transporte y comunicaciones; correos y telecomunicaciones; comercio exterior; finanzas y bancos; educación y trabajo; justicia; diversos (movimiento de hospitales, accidentes de tráfico, incendios, etc.). (Ven-*1410*.A5.)

CENSUS—CENSOS

Arg *Censo Escolar de la Nación: La Distribución por Zonas de la Población Argentina y Su Relación con los Hechos Culturales, Económicos y Sociales.* 2a. edición. Buenos Aires, Tall. Gráf. del Consejo N. de Eduación, 1946. Consejo Nacional de Educación. Censo Escolar de la Nación. 215 p. (Arg-*2230*.C5.)

Can *Eighth Census of Canada, 1941. Huitième Recensement du Canada, 1941.* Volume III. Ages of the population classified by sex, conjugal condition, racial origin, religious denomination, birthplace, etc. Ages de la population classifiés par sexe, état conjugal, origine raciale, religion, lieu de naissance, etc. Ottawa, Edmond Cloutier, 1946. Dominion Bureau of Statistics. Bureau Fédéral de la Statistique. 838 p. (Can-*2200*.C5.)

Can *Eighth Census of Canada, 1941. Huitième Recensement du Canada, 1941.* Volume VIII, Agriculture (in 2 parts, en 2 parties): Part I—partie I, Canada, Prince Edward Island, Nova Scotia, New Brunswick, Quebec-Canada, Ile du Prince-Edouard, Nouvelle-Ecosse, Nouveau-Brunswick, Québec; part II—partie II, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon—Ontario, Manitoba, Saskatchewan, Alberta, Colombie Britannique, Yukon. (Can-*2200*.C5.)

Pan *Censo Agro-Pecuario de la Provincia de Herrera, Diciembre 1945.* Panamá, Imp. Nacional, 1947. Ministerio de Agricultura, Comercio e Industrias. Sección de Economía Agrícola. 165 p. (Pan-*2210*.C5.)

WI *West Indian Census, 1946.* Bulletin no. 5, *Conjugal Condition and Fertility in the Leeward Islands.* Kingston, Jamaica, 1947. 27 p. Mimeographed. (WI-*2200*.W5.)

STATISTICAL SCIENCE—CIENCIA ESTADISTICA

Int *Guía para la Clasificación de las Mercaderías en las Estadísticas del Comercio Internacional según el "Basic Classification Scheme" del IASI.* Sobre la base de la "Minimum List," y de las notas explicativas al "Draft Customs Nomenclature." Por Carlos Procaccia. Edición preliminar. Quito, Imp. del Banco Central del Ecuador, 1947. Banco Central del Ecuador. 307 p. (Int-*3210*.G5.)

Int *International Standards for Statistics of Employment, Unemployment and the Labor Force, Cost of Living and Industrial Injuries Adopted by the Sixth International Conference of Labour Statisticians, Montreal, August 1947.* Montreal, 1947. International Labour Office. 27 p.

Published also in French. (Int-*3200*.I6.)

Int *Normes Internationales pour les Statistiques de l'Emploi, du Chômage et de la Main d'Oeuvre, du Coût de la Vie des Accidents du Travail, Adopteés par la Sixième Conférence Internationale des Staticiens du Travail, Montréal, Août 1947.* Montréal, 1947. Bureau International du Travail. 29 p.

Publié aussi en anglais. (Int-*3200*.N5.)

Bras *Construction of National Convertibility Indexes for Foreign Trade Statistical Classifications: Illustrations of the Work. Preparación de Indices Nacionales de Convertibilidad para Clasificaciones Estadísticas del Comercio Exterior: Ilustraciones del Trabajo.* Contributed by the Brazilian Delegation. Contribución de la Delegación Brasileña. International Statistical Conferences. Conferencias Internacionales de Estadística, Washington, D. C., 1947. Rio de Janeiro, 1947. 110 p. (Bras-*3210*.C5.)

Chile *Creación del Consejo Nacional Coordinador de Estadística.* Memorándum no. EP 139. Santiago, mayo 1944. Ministerio de Economía y Comercio. Departamento General de Política Económica. Departamento de Estudios y Planes Económicos. 9 p. Copia a máquina.

Incluye memorándum no. 140: *Proyecto de Decreto de Creación del Consejo Nacional Coordinador de Estadística.* (Chile-*3030*.C5.)

CR *Statistics in Costa Rica: A Brief Survey.* A report prepared at the request of the government of Costa Rica under the "Cooperation with the American Republics" program of the Interdepartmental Committee on Scientific and Cultural Cooperation . . . By Thomas F. Corcoran. Washington, D. C., May 1947. United States. Department of Commerce. Bureau of the Census. 49 p. (CR-*3030*.S5.)

Guat *Informe de las Labores Realizidas por la Dirección General de Estadística de Guatemala durante el Año 1946.* XVI p.

Incluye esquema de organización. (Guat-*3030*.I5.)

Méx "Problems and Tasks of Statistics in Mexico." By Gilberto Loyo. *The Social Sciences in Mexico and News about the Social Sciences in South and Central America,* vol. I, no. 1, May 1947, p. 56-61. (Méx-*9000*.S5.)

Perú *Antecedentes y Fundamentos del Proyecto de Organización del Consejo Superior de*

Estadística del Perú. Por Ricardo Luna Vegas. Lima, Imp. Torres Aguirre, S. A. 1947. 36 p. (Perú-*3030*.A5.)

USA *The American Statistician.* A publication of the American Statistical Association. 1947- . Bimonthly. Washington, D. C.
Supersedes the *ASA Bulletin.* (USA-*3040*.A4.)

USA *Procedures Used in Compiling Monthly Statistics Relating to Employment and Pay Rolls.* Washington, D. C., May 1945. Department of Labor. Bureau of Labor Statistics. Office of the Chief Statistician. 72 p. (USA-*9200*.P3.)

USA *Schedule A: Statistical Classification of Imports into the United States.* With rates of duty and regulations governing the preparation of monthly, quarterly and annual statements of imports. September 1, 1946, edition. Washington, D. C., U. S. Govt. Print. Off., 1946. Department of Commerce. Bureau of the Census. 165 p. (USA-*3210*.S3.)

Ven "Exposición que al Ciudadano Ministro de Fomento Eleva la Comisión Designada para Estudiar los Informes Presentados por los Departamentos de Estadística de las Diferentes Dependencias Oficiales, con Vista a la Coordinación de las Actividades Estadísticas Nacionales." *Revista de Fomento*, año IX, no. 66, enero-marzo 1947, p. 9-22.
Comprende: Designación de la Comisión; situación de la estadística nacional; resolución de la Comisión. (Ven-*6000*.R5.)

NonG *Actuarial Statistics: Vol. 1, Statistics & Graduation.* Published for the Institute of Actuaries and the Faculty of Actuaries. By H. Tetley. Coordinating editor, Harry Freeman. London, Cambridge University Press, 1946. 285 p. Unexamined. (NonG-*6730*.A5.)

NonG *The Advanced Theory of Statistics, Vol. II.* By Maurice G. Kendall. London, Charles Griffin & Co. Ltd., 1946. 521 p. Unexamined. (NonG-*3140*.A6.)

NonG *Curso de Estadística Metodológica y Aplicada, por Correspondencia.* Por Carlos Procaccia. Quito, 1946. Ministerio de Economía. Dirección General de Estadística y Censos. 2 vol. (?): Primera parte, *Nociones de Estadística Metodológica.* (NonG-*3330*.)

NonG *How to Read Statistics.* By R. L. C. Butsch. Milwaukee, Wisconsin, Bruce Publishing Co., 1946. 184 p. Unexamined.
" . . . Another attempt to convey statistical understanding to persons without any mathematical background. . . . The emphasis is to be on the 'why' and not on the 'how'; not a single formula appears in the book. The subject matter covered ranges from graphic presentation and averages through partial and multiple correlation, sampling errors, and analysis of variance and covariance. The examples used are from educational psychology. The presentation is simple and lucid, on the whole." (Source: *Journal of the American Statistical Association*, December 1946, p. 602.) (NonG-*3330*.)

NonG *Introduction to Mathematical Statistics.* By Paul G. Hoel. New York, John Wiley & Sons, Inc., 1947. 258 p. Unexamined.
"This book is intended as a textbook for a two-semester course in modern mathematical statistics with an elementary calculus prerequisite . . . "(Source: *Journal of the American Statistical Association*, June 1947, p. 324.) (NonG-*3330*.)

NonG *Manual de Estatística.* Por Amaro D. Guerreiro. Lisboa, Tipo. Matemática, Lda., 1947. Portugal. Instituto Nacional de Estatística. 310 p. (NonG-*3330*.)

DEMOGRAPHY—DEMOGRAFIA

Int "Concentración y Desarrollo Urbano en América Latina." Por Ana Casís y Kingsley Davis. *El Trimestre Económico*, vol. XIV, no. 3, octubre-diciembre, 1947, p. 406-456.
Traducción de "Urbanization in Latin America," publicado en *The Milbank Memorial Fund Quarterly.* (Méx-*6000*.T5.)

Int *Summary of International Vital Statistics, 1937-1944.* Washington, D. C., U. S. Govt. Print. Off., 1947. United States. Federal Security Agency. U. S. Public Health Service. National Office of Vital Statistics. 299 p.
Contents: Qualifications of the data; population; natality; general mortality; longevity; nuptiality; divorce and the divorce rate; list of significant dates in the wartime history of selected European countries; figures; tables. (Int-*5200*.S7.)

Can *Cancer Mortality in Canada and the Provinces, 1921-44.* Ottawa, 1947. Department of Trade and Commerce. Dominion Bureau of Statistics. Vital statistics analytical report, no. 3. (Can-*5212*.C5.)

Can *Vital Statistics, 1944. Statistiques Vitales, 1944.* Twenty-fourth annual report. Vingt-quatrième rapport annuel. Ottawa, Edmond Cloutier, 1946. 765 p. (Can-*5200*.V5.)

RepDom *Estadística Demográfica, 1943-1946.* Ciudad Trujillo, 1947. Dirección General de Estadística. 130 p. (RepDom-*5000.*E5.)

USA "Estimating the Resident Alien Population of the United States." By E. P. Hutchinson and Ernest Rubin. *Journal of the American Statistical Association,* vol. 42, no. 239, September 1947, p. 385-400. (USA-*3040.*J5.)

USA "The Social Integration of American Cities of More than 100,000 Population." By Robert C. Angell. *American Sociological Review,* vol. 12, no. 3, June 1947, p. 335-342. (USA-*9000.*A6.)

WI *West Indian Census, 1946.* Bulletin No. 5, *Conjugal Condition and Fertility in the Leeward Islands.* Kingston, Jamaica, 1947. 27 p. Mimeographed. (WI-*2200.*W5.)

NonG "Derivation of Total Fertility, Gross and Net Reproduction Rates from Census Statistics of Marriage Fertility." By J. R. H. Shaul. *Journal of the Royal Statistical Society,* vol. CIX, part III, 1946, p. 278-283. (GrBr-*3040.*J5.)

NonG *Estudio Biométrico sobre el Desarrollo Diferencial del Organismo Humano.* Conferencia auspiciada por la Facultad de Medicina de la Universidad Central, Caracas, 1947. Por R. de Shelly Hernández. 24 p. Unexamined. (NonG-*5000.*E5.)

ECONOMICS—ECONOMIA

Int *El Desarrollo Industrial en América Latina.* Redactor: Carlos Moyano Llerena. Montevideo, 1947. Consejo Interamericano de Comercio y Producción. 108 p. (Int-*6400.*D5.)

Int *Directory of Economic and Statistical Projects.* A classified list of subjects completed, in progress, or planned by United Nations, the specialized agencies and inter-governmental organizations. Preliminary issue. Lake Success, New York, July 1947. United Nations. Department of Economic Affairs. Division of Economic Stability and Development. 69 p. (Int-*6000.*D5.)

Int *Evolución Industrial en América: Motivaciones, Características y Condiciones.* Por Pedro I. Mendive. Montevideo, 1947. Consejo Interamericano de Comercio y Producción. 71 p. (Int-*6400.*E6.)

Int *Inland Transport Statistics.* Montreal, 1947. International Labor Office. Inland Transport Committee. 41 p. Unexamined. (Int-*6610.*I5.)

Int *Revista de Economía Continental.* Publicación mensual de asuntos económicos 1946- . México, D.F.

Incluye: Editoriales; sección doctrinal; sección divulgadora (crónica e informaciones; doctrinas económicas; etc.); sección de revistas (finanzas públicas; asociaciones y empresas; producción y consumo; comercio exterior; agricultura y ganadería; política monetaria; precios y salarios; etc.; índice de revistas); sección de libros (análisis y crítica); sección oficial (por países); el estado económico y financiero (por países); noticias. (Méx-*6000.*R6.)

Int "Wool in the World Economy." By Gerda Blau. *Journal of the Royal Statistical Society,* vol. CIX, part III, 1946, p. 179-242.

Includes a discussion on the paper, p. 236-242. (GrBr-*3040.*J5.)

Arg *IPOR Market Data Book for Argentina.* New York, 194 ? Loose-leaf. International Public Opinion Research, Inc. 2 vol.

Cover title: *Market Data for Argentina.*

One of a series covering various countries. Contents: The land; history; government; distribution of population; characteristics of population; general economic situation; industry; petroleum; agriculture; banking and exchange; transportation; automobiles; communications; trade; principal goods required from abroad; distribution of goods; buying power; media; sources. (Arg-*6000.*I7.)

Bol *Comercio Exterior, Anuario de 1944.* La Paz, 1946. Ministerio de Hacienda. Dirección General de Estadística. No examinado. (Bol-*6900.*C.5)

Bol *18a. Memoria Anual Correspondiente a la Gestión del Año 1946.* Presentada al Señor Ministro de Hacienda y Estadística. La Paz, Imp. y Editorial "Artística," mayo 1947. Banco Central de Bolivia. 108 p. (Bol-*6720.*M5.)

Bras *Anuário Estatístico, 1945.* 9a edição. São Paulo, Indústria Gráf. Siqueira; Salles Oliveira & Cia. Ltda., 1945. Superintendencia dos Serviços do Café. Secretaria da Fazenda do Estado de São Paulo. 190 p.

Conteúdo: O café no Brasil; o café nos principais países produtores; o café nos principais países consumidores; cotaçoes do café; taxas e impostos que pesam sôbre o café; câmbio; gráficos. (Bras-*6210.*A8.)

Bras *Comércio Exterior do Brasil. Brazil's Foreign Trade.* Importação e exportação segundo a utilização e o grau de elaboração dos produtos. Imports and exports

according to end use and degree of processing of the products. Rio de Janeiro, Imp. Nacional, 1945. Conselho Federal do Comércio Exterior. 115 p. (Bras-*6900*.C35.)

Bras *Foreign Commerce of Brazil, 1940-1946.* One of series of reports on the foreign trade of the American republics prepared in the Division of Economic Information, Pan American Union. Washington, D. C., 1947. 21 p. Foreign trade series, no. 207. (Bras-*6900*.F5.)

Can *Monthly Report on Consumption, Production and Inventories of Rubber.* 1947- . Ottawa. Department of Trade and Commerce. Dominion Bureau of Statistics. General Manufactures Branch.

At head of title: *Census of Industry: General Manufacturing Statistics.* (Can-*6020*.M5.)

Can *Monthly Report on Inventories and Shipments by Manufacturing Industries.* 1947- . Ottawa. Department of Trade and Commerce. Dominion Bureau of Statistics. General Manufactures Branch.

At head of title: *Census of Industry: General Manufacturing Statistics.* (Can-*6400*.M65.)

Can *Net Income of Farm Operators from Farming Operations, Canada, 1938 to 1945.* Ottawa, 1946. Department of Trade and Commerce. Dominion Bureau of Statistics. Agricultural Division. 25 p. (Can-*6200*.N5.)

Chile *Industrias, Año 1944.* Santiago, Dirección General de Prisiones. Imp., abril 16, 1947. Dirección General de Estadística. 67 p. (Chile-*6400*.I5.)

Col *Informe y Datos Estadísticos Presentados por el Superintendente Bancario al Señor Ministro de Hacienda y Crédito Público, 1946.* Bogotá, Imp. del Banco de la República, 1946. Superintendencia Bancaria. 256 p. No examinado. (Col-*6720*.I7.)

Col *IPOR Market Data Book for Colombia.* New York, 194 ? Loose-leaf. International Public Opinion Research, Inc. 150 p. (approx.)

Cover title: *Market Data for Colombia.*

One of a series covering various countries. Contents: The land; history; government; distribution of population; characteristics of population; general economic situation; industry; petroleum; agriculture; banking and exchange; transportation; automobiles; communications; trade; principal goods required from abroad; distribution of goods; buying power; media; sources. (Col-*6000*.I7.)

CR *Boletín de Exportación, Año 1946.* No. 6. San José, Imp. Nacional, 1947. Dirección General de Estadística. 40 p. (CR-*6900*.B5.)

Cuba *Balanza de Pagos Internacionales de Cuba, 1946.* Habana, P. Fernández & Cía., septiembre 1947. Ministerio de Hacienda. Dirección General de Estadística. 39 p. (Cuba-*6910*.B5.)

Cuba *Foreign Commerce of Cuba, 1940-1946.* One of a series of reports on the foreign trade of the American republics prepared in the Division of Economic Information, Pan American Union. Washington, D. C., 1947. 25 p. Foreign trade series, no. 208 (Cuba-*6900*.F5.)

Cuba *IPOR Market Data Book for Cuba.* New York, 194 ? Loose-Leaf. International Public Opinion Research, Inc. 200 p. (approx.)

Cover title: *Market Data for Cuba.*

One of a series covering various countries. Contents: The land; history; government; distribution of population; characteristics of population; general economic situation; industry; petroleum; agriculture; banking and exchange; transportation; automobiles; communications; trade; principal goods required from abroad; distribution of goods; buying power; media; sources. (Cuba-*6000*.I5.)

Cuba *Mining and Manufacturing Industries in Cuba.* One of a series of reports on mining and manufacturing industries in the American republics. Washington, D. C., 1947. United States Tariff Commission. 47 p. (Cuba-*6400*.M5.)

Ec *Comercio Exterior Ecuatoriano.* Suplemento del *Boletín Mensual.* 1947- . Mensual. Quito. Banco Central del Ecuador. Departamento de Investigaciones Económicas y Estadística. (Ec-*6900*.C5.)

Ec *Memoria Anual que el Consejo de Administración del Banco Central del Ecuador Presenta a la Asamblea de Accionistas por el Ejercicio Económico de 1946.* Quito, Imp. del Banco Central, 1947. Banco Central del Ecuador. 30 p. (Ec-*6720*.M5.)

Guat "Economía Nacional de Guatemala." *Panamérica Comercial,* vol. XVI, no. 2, febrero 1947. 102 p.

El séptimo de una serie de estudios que se presentan en *Panamérica Commercial* sobre las economías nacionales de las repúblicas americanas. Contiene: Producción (agricultura, ganadería, industria, precios y el costo de la vida); comercio exterior; finanzas; transportes y comunicaciones; bibliografía. (Int-*6000*.P4.)

Guat "National Economy of Guatemala." *Comercial Pan America*, vol. XVI, no. 2, February 1947. 96 p.

Number 7 of a series of studies appearing in *Commercial Pan America* on the national economies of the American republics. Includes: Production (agriculture, stockraising, industry, prices and the cost of living); foreign trade; finance; transportation and communications; bibliography. (Int-*6000*.C7.)

Méx "*Fundamentos de las Valuaciones de la Riqueza Nacional.*" Por Corrado Gini. *El Trimestre Económico*, vol. XIV, no. 3, octubre-diciembre, 1947, p. 345-405.

Comprende: Objeciones económicas a la valuación de la riqueza nacional; significado económico de las valuaciones de la riqueza nacional. (Mex-*6000*.T5.)

Méx *IPOR Market Data Book for Mexico.* New York, 194 ? Loose-leaf. International Public Opinion Research, Inc. 2 vol.

Cover title: *Market Data for Mexico.*

One of a series covering various countries. Contents: The land; history; government; distribution of population; characteristics of population; general economic situation; industry; petroleum; agriculture; banking and exchange; transportation; automobiles; communications; trade; principal goods required from abroad; distribution of goods; buying power; media; sources. (Méx-*6000*.I6.)

Pan "Economía Nacional de Panamá." *Panamérica Comercial*, vol. XVI, no. 1, enero 1947. 44 p.

El sexto de una serie de estudios que se presentan en *Panamérica Comercial* sobre las economías nacionales de las repúblicas americanas. Contiene: Población (composición y actividad); agricultura (programa agrícola; censo agrícola del Distrito de Penonomé, 1943; censo agrícola de 1942; producción agrícola, 1941-45; Banco Agro-Pecuario e Industrial); finanzas públicas; comercio exterior; comercio e industria; construcción particular y utilidades públicas; banca privada; relación entre Panamá y la Zona del Canal; bibliografía. (Int-*6000*.P4.)

Par *Indices Alfabético y Numérico para la Estadística del Comercio Exterior.* Segunda edición. Asunción, 1947. Ministerio de Hacienda. Dirección General de Estadística. 143 p. (Par-*6900*.I6.)

Perú "La Balanza de Operaciones Internacionales del Perú." *Boletín Mensual del Banco Central de Reserva del Perú*, año XVII, no. 189, agosto 1947, p. 5-19. (Perú-*6720*.B5.)

RepDom *Exportación de la República Dominicana, 1946.* Vol. XV, no. 1-13. Ciudad Trujillo, 1947. Dirección General de Estadística. 318 p. (RepDom-*6900*.E7.)

RepDom *Movimiento Marítimo en los Puertos Habilitados de la República.* 1947- . Trimestral. Ciudad Trujillo. Secretaría de Estado del Tesoro y Crédito Público. Sección de Estadística. (RepDom-*6615*.M5.)

RepDom *Registro Público: Estadística de Operaciones Registradas, 1945-1946.* Ciudad Trujillo, 1947. Dirección General de Estadística. 123 p. (RepDom-*6721*.R5.)

Ur *IPOR Market Data Book for Uruguay.* New York, 194 ? Loose-leaf. International Public Opinion Research, Inc. 300 p. (approx.)

Cover title: *Market Data for Uruguay.*

One of a series covering various countries. Contents: The land; history; government; distribution of population; characteristics of population; general economic situation; industry; petroleum; agriculture; banking and exchange; transportation; automobiles; communications; trade; principal goods required from abroad; distribution of goods; buying power; media; sources. (Ur-*6000*.I5.)

NonG *Actuarial Statistics: Vol. 1, Statistics & Graduation.* Published for the Institute of Actuaries and the Faculty of Actuaries. By H. Tetley. Coordinating editor, Harry Freeman. London, Cambridge University Press, 1946. 285 p. Unexamined.

"This volume is designed as a textbook for students preparing for the examinations of the Institute of Actuaries (England). It assumes a knowledge of the measures of locations and dispersion as described in an earlier textbook published for the Institute of Actuaries, *Mathematics for Actuarial Students* by H. Freeman." (Source: *Journal of the American Statistical Association*, June 1947, p. 337-338.) (NonG-*6730*.A5.)

NonG *Agricultural Price Analysis.* By Geoffrey S. Shepherd. Second edition. Ames, Iowa, Iowa State College Press, 1947. 231 p. Unexamined.

"The book fulfills the opening promise that 'principles of economic theory and methods of statistical analysis are applied to the study of agricultural prices.'" (Source: *Journal of the American Statistical Association*, September 1947, p. 487.) (NonG-*6200*.A4.)

NonG *Measuring Business Cycles.* By Arthur F. Burns and Wesley C. Mitchell. New York, 1946. National Bureau of Economic Research, Inc. 560 p. Studies in business cycles, no. 2. Unexamined. (NonG-*6000*.M5.)

HEALTH AND CULTURAL STATISTICS
ESTADISTICAS DE SALUBRIDAD Y CULTURA

Int *Informe Estadístico de Enfermedades Cuarentenables en los Países de América, Años 1945 y 1946. Statistical Report on Quarantinable Diseases in the American Countries, Years 1945 and 1946.* Fiebre amarilla, peste, tifo exantemático, viruela. Yellow fever, plague, typhus fever, smallpox. Washington, D. C., November 1947. Oficina Sanitaria Panamericana. Sección de Estadística. Pan American Sanitary Bureau. Statistical Section. 19 p. (Int-*7110*.I7.)

Chile "La Sanidad en Chile." Informe presentado a la XII Conferencia Sanitaria Panamericana celebrada en Caracas, Venezuela, del 12 al 24 de enero de 1947. Por Nacianceno Romero y O. *Boletín de la Oficina Sanitaria Panamericana*, vol. 26, no. 4, abril 1947, p. 289-304. (Int-*7110*.B5.)

CR "La Sanidad en Costa Rica." Tomado del mensaje presidencial al Congreso Constitucional publicado en La Gaceta del 3 de mayo de 1946. Por Teodoro Picado. *Boletín de la Oficina Sanitaria Panamericana*, vol. 26, no. 3, marzo 1947, p. 217-219. (Int-*7110*.B5.)

Cuba *Anuario Estadístico Escolar*. 1946- . Habana. Ministerio de Educación. (Cuba-*7200*.A5.)

Cuba *Anuario Estadístico Escolar (Avance No. 1), 1946*. La Habana, Editorial Lex, abril 1946. Ministerio de Educación. Negociado de Estadística General. 115 p. (Cuba-*7200*.A5.)

Cuba "La Sanidad en Cuba." Tomado de la Gaceta Oficial del 16 de abril de 1946. Por Ramón Grau San Martín. *Boletín de la Oficina Sanitaria Panamericana*, vol. 26, no. 3, marzo 1947, p. 220-224. (Int-*7110*.B5.)

Ec "La Sanidad en Ecuador." Informe presentado por la delegación ecuatoriana . . . a la XII Conferencia Sanitaria Panamericana celebrada en Caracas, Venezuela, del 12 al 24 de enero de 1947. *Boletín de la Oficina Sanitaria Panamericana*, vol. 26, no. 4, abril 1947, p. 305-313. (Int-*7110*.B5.)

ElSal *Memoria de las Labores Desarrolladas por el Poder Ejecutivo en los Ramos de Cultura y Asistencia Social durante el Año 1946*. Presentada a la Honorable Asamblea Nacional Legislativa el 12 de junio de 1947 por el ministro de dichas carteras. San Salvador, Imp. Nacional, 1947. Ministerio de Cultura y Asistencia Social. 270 p. (ElSal-*7000*.I5.)

Méx *Estadística Educativa*. Boletín trimestral de la Dirección General de Estadística Educativa. 1947- . México, D. F. Secretaría de Educación Pública. Dirección General de Estadística Educativa. (Méx-*7200*.E5.)

Perú *Bases Experimentales para la Eliminación de la Malaria en la Costa del Perú*. Conferencia sustentada en el Auditorium del Ministerio de Salud Pública y Asistencia Social, agosto 7 de 1947. Por Augusto Corradetti. Lima, Imp. M. S. P. A. S., 1947. Dirección General de Salud Pública. Departamento de Malaria. 14 p. (Perú-*7110*.B7.)

Perú "La Sanidad en el Perú." Por Julio Ernesto Portugal. *Boletín de la Oficina Sanitaria Panamericana*, vol. 26, no. 1, enero 1947, p. 8-17. (Int-*7110*.B5.)

USA "La Sanidad en Estados Unidos." Tomado del informe anual para el año 1944-45. Por Thomas Parran. *Boletín de la Oficina Sanitaria Panamericana*, vol. 26, no. 5, mayo 1947, p. 385-389. (Int-*7110*.B5.)

USA "La Sanidad en Estados Unidos." Tomado del informe anual para el año 1945-46. Por Thomas Parran. *Boletín de la Oficina Sanitaria Panamericana*, vol. 26, no. 6, junio 1947, p. 486-488. (Int-*7110*.B5.)

NonG *Item-Analysis Data: Their Computation, Interpretation, and Use in Test Construction*. By Frederick B. Davis. Cambridge, Mass., 1946. Harvard University. Graduate School of Education. 42 p. Harvard education papers, no. 2. Unexamined. (NonG-*7200*.I7.)

NonG "The Statistical Study of Infectious Diseases." By Major Greenwood. *Journal of the Royal Statistical Society*, vol. CIX, part II, 1946, p. 85-110.
Includes a discussion on the paper, p. 103-110. (GrBr-*3040*.J5.)

GOVERNMENT AND POLITICAL STATISTICS
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